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ABSTRACT

Intended for speech and language pathologists, teachers, and others, the book serves as an introduction to the use of total communication with autistic and other severely impaired populations. A brief introduction addresses sign language adaptation, criteria for choosing a core vocabulary, and a hierarchy of receptive and expressive skills. Guidelines for the modified approach are given, along with descriptions of signing activities and a discussion of the rationale for teaching the manual alphabet. Activity descriptions contain information on goal, performance objective, materials, procedure, and suggested vocabulary. Appended are sample data sheets and photos of common signs. (CL)

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# MODIFIED AUTISTIC TOTAL COMMUNICATION:

## A Manual for Teaching Modified Total Communication to the Autistic and Severely Impaired

**A.**
**T.**
**C.**

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Anita Marcott-Radke

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## INTRODUCTION TO M.A.T.C.

This book was prepared to be used as an introduction to the fundamentals of total communication as it has been modified for use with autistic and other severely impaired populations (Modified for the Autistic Total Communication, M.A.T.C.). The purposes of this book are:

1) To give speech and language pathologists, educators and other interested individuals an awareness of the importance of the development of communication skills to the total development of autistic and other severely impaired students;
2) To describe segments of total communication and provide an overview of the selected signing system, SEE II (Signing Exact English);
3) To provide insights into the applications and modifications of the SEE II Program as it has been modified for the autistic and other severely impaired students (M.A.T.C.);
4) To provide a hierarchal framework of activities for general skill development in both receptive and expressive communication tasks;
5) To provide an introduction to basic sign vocabulary and a pictorial display of sign formulation;
6) To provide a systematic method for recording daily data for each of the basic activities; and

7) To provide a model for the delivery of speech and language services to autistic and other severely impaired students using a M.A.T.C. program.

This book was not designed as a sign dictionary, although a number of photographs of fundamental signs have been included. It is to be used as an introduction to the fundamentals for establishing signed communication. It is our intent that, with experience, educators will be able to modify these fundamental principles and activities to meet the individual needs of each student.

# COMMUNICATION SKILLS:
# A BASIS FOR LEARNING AND SOCIAL INTERACTION

In the brief history of related research examining the syndrome of autism, the lack of language and communication development within this population has been consistently identified as a salient feature. The various types of speech and language disorders exhibited by the autistic have been investigated and reported (Shapiro et. al., 1970; Wolff and Chess, 1965; Churchill, 1978) but with little conclusive evidence which would provide a consistent description of the specific characteristics of their language pathology. The three most commonly used descriptors are mutism, echolalia and severe language delay. The use of these three generalized terms would therefore suggest that language characteristics of the autistic have been found to be idiopathic among individuals.

Upon review of individual case studies, a wide range of individual differences within the three major descriptors can readily be observed. Some autistic students, though verbal, are severely delayed in receptive and expressive language. Others are verbal in that they are echolalic but are receptively limited, while still others remain mute with questionable communicative abilities.

With autistic students, as with any population, communication is a basis for learning. In a higher conceptual framework, communication skills become that of an organized process called language. Many autistic students do not exhibit behaviors which demonstrate a concept of the use and functions of communication. Consequently, without intervention the autistic student does not develop an organized language system.

Initially, it is essential to teach many autistic students the importance of a communication "exchange". The term "exchange" implies that a specific action by the student can elicit a response by the teacher/clinician and vice versa. Many of these students do not spontaneously initiate the simplest exchanges, such as looking at, pointing to, or pulling the teacher/clinician to a desired object. Other students may imitate some of the teacher/clinician's gestures, such as crossing their arms or scratching their heads. These students do not have an understanding of the symbolic meaning of specific gestures such as pointing, yet have learned to imitate gestures nondiscriminately.

There are two types of exchanges; one that indicates reception and understanding and the other, that which expresses symbolic information through the use of a sign. The usual gestural response for receptive activities is either pointing to or handing the object to the teacher/clinician. In a receptive exchange the teacher/clinician places several objects on the table. A foil or undesirable object may also be included. In order for the student to participate in the exchange, (s)he must remain stationary long enough to look at the items, make eye contact with the teacher/clinician, and attend while receiving a directive, (i.e., "Show me what you want"). The student must then comply with the directive by either making a gesture response, such as pointing to an object, or by allowing the teacher/clincian to prompt the gesture response. Teacher prompts and cues are often necessary to attain these behaviors when beginning an exchange. Therefore, the teacher/clincian must begin to develop the prerequisite learning skills of in-seat behaviors, compliant behaviors and eye contact behaviors when beginning an exchange and continue this procedure while exchanges are expanded.

Some autistic students will frequently appear oblivious to exchanges initiated by others. Without any behavioral interventions, these students become so involved in their "autistic" behaviors, such as self-stimulating noises or hand flapping, that communication initiations made by others pass unnoticed. The students do not seem to recognize and assimilate the meaning of these gestures in a symbolic manner. To reiterate, it is important to develop some prerequisite behaviors for learning with autistic students at this level, namely, in-seat or stationary position behavior, compliance and eye contact. This does not imply that a student must be able to maintain these behaviors, e.g. for a five minute period prior to communication training. It does, however, designate that with or without prompts, a student must be able to relate appropriately for a long enough period to complete the exchange.

In an effort to establish the student's functioning level, (s)he should first be given the opportunity to respond spontaneously. If spontaneous gestures are not present, the teacher/clinican should begin programming at the state appropriate to the student's level of functioning (e.g., begin with imitation if the student can perform imitatively) and work up to spontaneous task completion.

Such intervening strategies would include the following steps:

1) If a response does not occur spontaneously, the teacher/clinican should then give the student a visual cue such as the starting position of the gesture. One modification that has been successful with some students is that of holding the object near the area where the sign is formed. Likewise, photographs and line drawings of the starting position of the sign have been successful cueing instruments with some students.
2) Should the student still not respond, the complete gesture is then presented for imitation.
3) If the student still does not imitate the gesture, the teacher/clinician then manipulates the student's hand(s) by shaping it/them into the desired gestural postiion.

The progress of a student's response on daily communication lessons can be measured on the basis of the above hierarchy using the four categories of spontaneous, cued, imitated, or manipulated responses. This process is further described in the section entitled Applications and Modifications of the M.A.T.C. SEE II System.

# TOTAL COMMUNICATION: HISTORY AND INVESTIGATION OF A SPECIFIC SYSTEM, "SIGNING EXACT ENGLISH"

The label "Total Communication", which is a term indicating a special educational methodology utilized in the education of the deaf, has been borrowed and modified for our purposes. Total communication typically includes many of the following elements: the use of speech, a sign system, finger spelling, auditory training, speech reading, amplification, et. al. There are two basic types of sign systems currently in existence: a sign-concept system (American Sign Language - AMESLAN), and a sign-word system (Signing Exact English - SEE II) with several options within the basic two types. The system currently being recommended for implementation and modification is Signing Exact English or the SEE II system. This signing system was chosen because it translates exactly into English, including morphemic and syntactic functions. The transition from a sign-word system to spoken and written English is easier than with a sign-concept system for students who have some verbal skills, who are learning to read, or those who may become verbal through the use of signs.

Constant modifications in the presentation of the SEE II system are necessary in order to meet the individual needs of the autistic students. Thus, the name Modified for the Autistic Total Communication (M.A.T.C) has been generated to label this communication system. Essentially, the communiques consist of a simultaneous presentation of sign and verbalization, with one sign for each word plus markings for prefixes, suffixes, and other morphological structures. Unlike the Total Communication developed for the deaf, amplification is not used and no formal speech reading is included. The modifications are discussed in the section entitled Applications and Modifications of the M.A.T.C. SEE II Program.

## APPLICATIONS AND MODIFICATIONS OF THE M.A.T.C. SEE II PROGRAM

When communicating with the autistic student, the goal of the teacher/clincian is to sign and to speak in short, complete, and grammatically correct sentences. Initially, the key words of a verbalization are signed simultaneously when introducing a M.A.T.C. program to a student. As a student becomes more familiar with signing, the teacher/clinician will usually sign and verbalize the entire sentence. However, there are some students who are gesturally echolalic and will attempt to imitate all the teacher/clinician's gestures. In these cases, the teacher/clincian will give the student a directive for appropriate hand behavior (i.e., hands folded, hands on the table) and sign only the key words of a verbalization. With some students it is necessary to continue this approach as a basis for their M.A.T.C. program. Other gestural echolalic students learn to tolerate a gradual increase in the number and complexity of signs presented while maintaining appropriate attention and hand behavior. They learn to receive and decode short complete sentences which are signed by the teacher/clinician and others.

The manner in which the signs are presented and emphasized may vary from student to student. For example, in the sentence, "This is a ball.", the teacher/clincian may stress the sign for ball using any of three methods (1) by repeating the word and sign several times, (2) by pointing to the ball after each repetition, or (3) by encompassing the ball with his/her hands while making the sign. These methods of emphasizing the sign visually help the student make the symbolic associations between the spoken word, the sign, and the object. In this case, the iconicity of the sign for ball also provides a visual image that closely approximates the object itself. An important consideration in choosing a core vocabulary is the iconicity of the sign. However, not all signs are visually similar to the actual object in which case other associations can sometimes be utilized.

## Criteria for Choosing a Core Vocabulary

There are several criteria which should be considered when choosing a core vocabulary for an individual M.A.T.C. program. The first of which is the consideration of the relevancy of an object or activity to the student. An object or activity may be relevant if (1) it is motivating to the student, (2) it is an activity within the student's daily living routine which he has not resisted or (3) it may be easily reinforced in the educational and home environment. Initially it is important to choose a core vocabulary of the signs most essential to the student's basic wants and daily living needs. The choice of vocabulary items which relate to daily living activities would facilitate the student's learning of those signs, increase his/her development of daily living skills and therefore would be an appropriate choice. Subsequently other relevant vocabulary can be added.

For example, a turn to jump on the trampoline may be highly motivating for one student who enjoys gross motor activities, is not afraid of the trampoline, and has access to the activity in his/her daily routine. Therefore, it may be of good source of vocabulary for that particular student. However, if the student seems fearful of the trampoline, is reluctant to participate in gross motor activities or has little opportunity to experience the trampoline, the choice of that sign for the student's core vocabulary might lead to failure.

The second consideration is the iconicity of the sign. Is there a visual association between the sign and concept being expressed? There are several ways in which this visual association can occur. A sign can present a visual image of the object it represents. As discussed previously, the sign for ball is made by forming the shape of the ball with both hands. A sign can also depict an action relating to the concept being expressed. For example, the sign for hammer is made by hammering in the air with an upright closed fist, as if holding a hammer. Similarly, the sign for jump is made by having the index and middle fingers of the dominant hand "jump up and down" on the palm of the nondominant hand. These signs revisualize the image or action of the noun or verb, affording more concrete stimuli.

Signs which include the manual alphabet as a component of the sign are sometimes selected when, and if, it is appropriate for a specific student. For example, the sign for shoe is made by tapping together two "s-hands", as the letter "s" is made in the manual alphabet. This type of visual association is used when a student has some reading abilities or when the sign is motorically easy to formulate. This association is used less frequently than the former two types of visual associations.

The third consideration in choosing a core vocabulary relates to motor movements necessary to form the sign. Is the sign easy to form or can it be modified to a less difficult or complex motor movement? The modification must retain the essence of the sign while not duplicating another sign. For example, the sign for "bike" is made by placing both hands in a fist position and rotating them as if peddling a bicycle. This sign is usually easy for students to make. While the sequence of motor movements required to form the sign for "pop" is complicated, it can be easily modified without losing its integrity. Therefore, by eliminating portions of the sign, the motor movements have been simplified but the integrity of the sign has been retained.

Although no hard and fast core vocabulary list can be established as appropriate to all students, the following items and activities are often included: favorite foods, toys, activities, in addition to daily living tasks and essential communications necessary for expression of basic needs such as bathroom/toilet, eat or drink. Occasionally, there are students who do not seem to prefer any items or activities, in which case the teacher/clinician selects activities pertinent to the student's environment and daily living routine. Repetition of these activities during work sessions help to reinforce the student's performance on the tasks.

## Hierarchy of Basic Skill Development for a M.A.T.C. Program

Essentially, a concrete syntactic approach to basic language development serves as a guideline for the M.A.T.C. hierarchy. As the prognosis for any autistic student's cognitive development is guarded, it is imperative that the vocabulary and concepts taught are consistently relevent to the student's basic wants and daily living needs. Caution is essential in choosing the core vocabulary within each category. The first category is comprised of specific nouns selected on the basis of their concreteness and relevance to the individual student. Once a student has achieved a small repertoire of nouns, concrete action verbs are then introduced. Reversed chaining, a process whereby the student completes the final portion of a sentence, is often utilized to acquire two or more word combinations. From this point, other significant language structures such as prepositions and adjectives are taught to those students demonstrating such cognitive capacity. Figure A provides a hierarchal framework for generalized skill development arranged from the simplest to the most difficult communication tasks both receptively and expressively. Program modifications are made to meet the needs of the individual students in relationship to their cognitive status, age, and prognosis. Further individualization occurs through vocabulary selection within each category. Guidelines for modification have not been developed since they are specific to the individual needs of the student, and therefore, clinical judgment must be exercised in each case.

## BASIC M.A.T.C. HIERARCHY

| RECEPTIVE SKILLS NON-SIGN GESTURAL RESPONSE | EXPRESSIVE SKILLS M.A.T.C. SIGN RESPONSE |
|---|---|
| 1. Receptive food/activity exchange. "Show me what you want?" "Point to what you want." "What do you want?" (Choice of three (3) foods, toys, activities.) | 1. Expressive food/activity exchange. "What is it?" "What do you want?" "Show me the sign". (Choice of three (3) foods, toys, activities.) |
| 2. Receptive nouns/objects. "Show me the (object)". | 2. Expressive nouns/objects. "What is it/this?" |
| 3. Receptive nouns/pictures. "Show me the picture of (object)". | 3. Expressive nouns/pictures. "What is it/this?" "Show me the sign". |
| 4. Receptive verbs with real actions. "Show me how you (action)". Following simple action directives in the classroom: "Stand up. Come here. Sit down..." | 4. The expressive counterpart of this activity is frequently omitted at this stage of development. It may be introduced concurrent with number 6. |
| 5. Following simple directives to complete a task for daily living skills. Use task analysis to assign each step of the task. Ex. Toothbrushing, set the table, dishwashing, washing face and hands... | 5. No expressive counterpart is used in this stage of development. |
| 6. Receptive verbs with pictured actions. "Show me the picture of (action)". | 6. Expressive verbs with pictured actions. "What is (the person) doing?" Expressing verbs with real actions. "What am I doing?" "What are you doing?" "What is (the person) doing?" |

| RECEPTIVE SKILLS NON-SIGN GESTURAL RESPONSE | EXPRESSIVE SKILLS M.A.T.C. SIGN RESPONSE |
|---|---|
| 7. Receptive chaining is similar to the number 6. "Show me the picture of "the person (verbing)". The student may also point to words on a sentence strip while the teacher/clinician signs and says the sentence. | 7. Reverse chaining to attain expansion of expressive sentence length. "Who is this?" "What is the person doing? Model using open-ended sentences, gradually allowing the student to fill in more of the sentence. "The person (boy) is (V) . (verb) "The person (boy) is V+ing (verbing). "The person (boy) (A) (V+ing). (Auxillary + verbing)<br>"The (S) (A) (V+ing)." (Subject + auxiliary + verbing). A sentence strip may also be used as visual input to go along with the signed response. |
| 8. Receptive vocabulary building on a unit/needs basis. Ex., cooking utensils, cleaning equipment, clothing, common objects, common actions... "Show me the (object/pictured object)". "Show me the action/pictured action)". | 8. Expressive vocabulary building on a unit/needs basis. Ex., cooking utensils, cleaning equipment, clothing, common objects, common actions... "What is it/this?" "What is the person doing?" |
| 9. Receptive responses to questions requiring noun answers. Student chooses the object or picture appropriate to the function. "What do you (verb)?" "Find the one you (verb)" "Which one do you (verb)?" "Show me the pictures of the one you (verb)? | 9. Expressive responses to questions requiring noun answers (with or without picture/object cues). "What do you (verb)? Tell me." "Find the one you (verb). What is it? Tell me (noun)". "Which one do you (verb)? Tell me." "Show me the picture of the one you (verb)? What is it. Tell me." |
| 10. Receptive responses to questions requiring verb answers. (Student chooses appropriate action picture). "What do you do with a/an (object)?" What is a/an (object) used for?" | 10. Expressive responses to questions requiring verb answer (with or without action picture cues.) "What do we do with a/an (object)? Tell me." "What is a/an (object) used for? Tell me." |

| RECEPTIVE SKILLS<br>NON-SIGN GESTURAL RESPONSE | EXPRESSIVE SKILLS<br>M.A.T.C. SIGN RESPONSE |
|---|---|
| 11. Receptive prepositions. "Put the (object) (preposition) - the object." ("Put the spoon in the cup") | 11. Expressive prepositions. "Where is the (object)?" |
| 12. Receptive adjectives. "Show me the (adjective) (object)." "Show me the cup." "Give me three (3) cups." "Give me the red one." Adjectives of size, number, color, quality and shape may be included. | 12. Expressive adjectives. "This is big and this cup is _____". "How many cups are here?" "What color is it?" This cookie is good and this one is ____." Adjectives of size, number, color, quality and shape may be included. |
| 13. Receptive plurals. "Show me the object/objects." | 13. Expressive plurals. "What are these?" |
| 14. Reception of above syntactic and morphological structure along with other developmentally appropriate parts of speech presented in varied situations. Sentence strips may be used. Ex. "Show me 'the noun + is + adjective' or 'the adjective + noun + is + verb'." | 14. Expression of above syntactic and morphological structure along with other developmentally appropriate parts of speech integrated into various sentence structures and in varied settings. Ex. "The noun + is + adjective." "The adjective + noun + is + verb-ing." |

Students with low cognitive abilities do not progress through the entire hierarchy. A breakdown often occurs when a transference from the concrete to the abstract is required. These students frequently require the use of real objects or a demonstration of actions in order to assign meeting to signed and verbalized communication. Many remain at the one word/sign utterance level with a core vocabulary of a few basic nouns and/or verbs. The presentation of pictures as stimuli for these students is often too abstract. Some students can be taught to match real objects to the pictures of these objects. A student's ability to acquire this transference from concrete objects to abstract pictorial representations is largely dependent upon that student's cognitive development and perceptual abilities. Innovative teaching techniques and materials offer a student more opportunities to make this transference when traditional methods have proven to be ineffective.

## Evaluating Performance on M.A.T.C. Signing Sessions

It is essential to closely monitor a participating student's progress when in a M.A.T.C. program. Data sheets are a critical part of this program as the teacher/clincian must be able to consistently monitor the student's progress or lack of it in order to make program adjustments. The majority of M.A.T.C. data sheets have one factor in common, which is the inclusion of qualitative measures of student responses.

The four hierarchal categories presented are: spontaneous, cued, imitated, and manipulated responses. Four types of cues are defined: signed, verbal, physical, and phonetic within the category of cued responses. Figure B illustrates a typical M.A.T.C. data sheet which can be used for many activities while other type data sheets have been specifically developed on a individualized basis.

## FIGURE B

## M.A.T.C. DATA SHEET

Student: ____________________

Performance Objective ________________________________________________________________

| SPECIFIC TASKS | Dates | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: | Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cued | | | | | | | | | | | | | | | | | | | | | | | | |
| | Imitated | | | | | | | | | | | | | | | | | | | | | | | | |
| | Manipulated | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous

c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated

M = manipulated

The teacher/clinician records the performance objectives, (e.g., John will sign for the following common objects ten out of ten times). The objects for which John is requested to sign are listed under the specific tasks. The teacher/ clincian then presents the object and asks "What is it?" If the student spontaneously signs the appropriate word, the teacher/clinician prints an "S" in the corresponding space. If a cue is required, a "C" is entered into the appropriate space and the number 1,2,3, or 4 is printed above the C to note the type of cue used. The number (1) represents a signed cue, (2) represents a verbal cue, (3) represents a physical cue, and (4) represents a phonetic cue. Likewise the letters "I" and "M" are entered into the appropriate space if the response is imitated (I) or manipulated (M). At the completion of ten responses, the number of each type of response is tallied and a percentage of spontaneous, cued, imitated and manipulated responses is readily available. Figure C provides a sample data sheet which includes data for two daily sessions. Comparisons can therefore be made on day to day performances.

This basic data sheet is amendable to many activities and performance objectives. Similar data sheets are utilized for receptive activities such as daily living skill sequences which provide step by step directions for tasks such as setting the table and brushing the teeth.

## FIGURE C

## M.A.T.C. DATA SHEET

Student: John Doe

Performance Objective John will sign for the following common objects 10 out of 10 times.

| SPECIFIC TASKS | Dates | 11/19 | 11/21 | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Plate | | 1/c | S | | | | | | | | | | | | | | | | | | | | | | | |
| 2. cup | | I | 2/c | | | | | | | | | | | | | | | | | | | | | | | |
| 3. spoon | | S | S | | | | | | | | | | | | | | | | | | | | | | | |
| 4. soap | | S | S | | | | | | | | | | | | | | | | | | | | | | | |
| 5. toothbrush | | M | M | | | | | | | | | | | | | | | | | | | | | | | |
| 6. hat | | S | S | | | | | | | | | | | | | | | | | | | | | | | |
| 7. sock | | 1/c | 1/c | | | | | | | | | | | | | | | | | | | | | | | |
| 8. pencil | | I | I | | | | | | | | | | | | | | | | | | | | | | | |
| 9. car | | 1/c | 1/c | | | | | | | | | | | | | | | | | | | | | | | |
| 10 shoe | | S | S | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: | Spontaneous | 40 | 50 | | | | | | | | | | | | | | | | | | | | | | | |
| | Cued | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | |
| | Imitated | 20 | 10 | | | | | | | | | | | | | | | | | | | | | | | |
| | Manipulated | 10 | 10 | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous

c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated

M = manipulated

## Placement of Students in a M.A.T.C. Program: Criteria

When a student meets one or more of the following criteria, (s)he may be considered for placement in a M.A.T.C. Program:

(1) By the age of five years or older, the student has exhibited little or no spontaneous verbal skills. The chronological age of five is supported by research as a determining criteria, but may vary with individual students based upon clinical judgments.

(2) A verbal student who exhibits difficulty with word retrieval.

(3) A student who exhibits little or no comprehension of names of common objects or simple directives regardless of age.

(4) The student who exhibits some prelinguistic behaviors but who as yet does not speak. As a minimum, these skills should include object permeanence, some responses to environmental stimuli such as auditory, tactile, and visual input and an emerging concept of the functions of a few common objects. Without this conceptual framework, it is unlikely that the student has the cognitive capacity essential to formulate and assimilate an organized communication system.

Although it is not necessary that a student be able to imitate signs to be considered for placement in a M.A.T.C. Program it may be helpful. A student may be manipulated to form the signs until the motor pattern is learned if she is unable to imitate. A student is usually allowed an extended trial period at the manipulation level before making a change in program assignment.

There are additional instances when M.A.T.C. may be implemented with a student. M.A.T.C. programs are sometimes utilized with verbal students who experience word retrieval problems. It may also be implemented with students whose syntactic structures are impaired. For these expressively limited students, the use of sign gives a visual representation for fast fading auditory stimuli. At times, verbal echolalic students have benefited from such a program when traditional interventions for echolalia have not yielded any significant change. These students may also be gesturally echolalic in that they imitate the gestures of the teacher/clinician, but without apparent assignments of symbolic meaning. Some of these echolalic students have benefited from M.A.T.C. while others have not. As yet, we have not been able to determine prognostic indicators.

M.A.T.C. programs have also been utilized with verbal students who withdraw or become noncompliant when verbalization is requested. M.A.T.C. is then used to promote communication in a positive and non-threatening manner. The increase of the students' verbal output is the desired outcome. In our experience, no student participating in this program has regressed or shown a loss of verbal skills and the larger percentage have shown considerable progress. There are some instances in which a student participating in a M.A.T.C. Program will become increasingly verbal and consequently the signs for learned vocabulary are faded. Signs are then used to teach only new vocabulary as necessary.

These guidelines and criteria have evolved from a trial and error process in programming for approximately 140 autistic and autistic-like students between the ages of three and twenty-six. It is necessary to apply clinical judgment in addition to the defined criteria for M.A.T.C. placement for some students. Clinical judgment includes a close examination of a student's developmental rates in skill areas other than language and an evaluation of the effect of interrupting behaviors on the student's ability to learn. This additional information helps the Speech and Language Clinician decide on program placement if there has been a question of the value of M.A.T.C. for a particular student. Although M.A.T.C. has not proved effective for every student to whom it has been prescribed, in no instance has it been found to be detrimental. Therefore, a M.A.T.C. program may be prescribed for a trial period with the inclusion and integration of a back-up system, such as a photo or picture card system.

## GUIDELINES FOR IMPLEMENTING M.A.T.C.

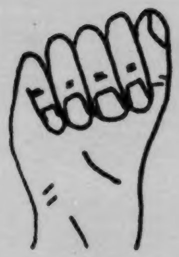
The following guidelines have been developed in order to facilitate students success in M.A.T.C. exchanges. It is essential that these guidlines be integrated into signing communiques in order to present the student with optimal learning opportunities.

1. Always speak simultaneously while signing to the student.
2. Decide which hand is dominant. This hand is the one that moves with most signs. Use the dominant hand consistently when communicating with the student.
3. Sign in a small area so that the student's visual attention is localized.
4. Attain the student's attention before beginning a communication exchange.
5. Sign accurately. Attempt only familiar signs. Practice a new sign before introducing it to the student.
6. Accept either a speech and/or sign response and reinforce it.
7. Reinforce the student's attempts at verbalization and stimulate articulatory skills.
8. Shape the student's hand into the correct sign formulation when an attempted sign is inaccurate.

# RATIONALE FOR TEACHING THE MANUAL ALPHABET

The manual alphabet has several important purposes particularly for the teacher/clinician. Hand positions of manual letters are used in the basic descriptions of signed words. This enhances the accuracy of sign formulation. For example, the sign for "shoe" is made by tapping the two "s" hands together twice. It is also used to fingerspell words for students who are at that learning level. A third use of the manual alphabet is to create name signs by initializing the first letter of the name and giving it movement by tapping of circling near a distinguishing feature of the person's face or body (pretty eyes, nice smile, long hair, etc.).

# Manual Alphabet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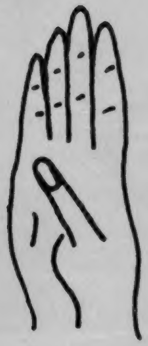
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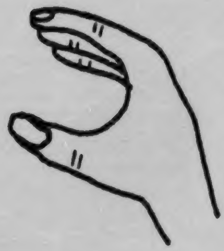
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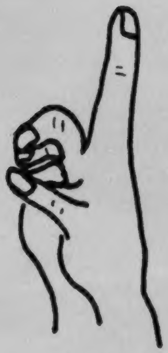
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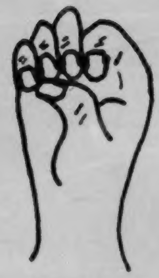
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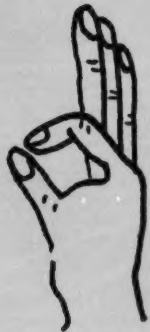
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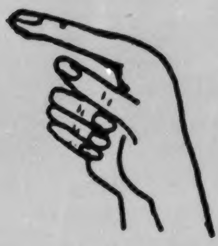
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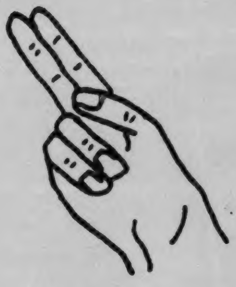
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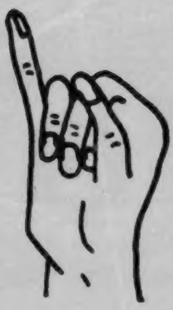
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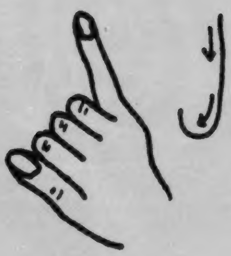
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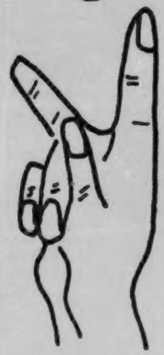
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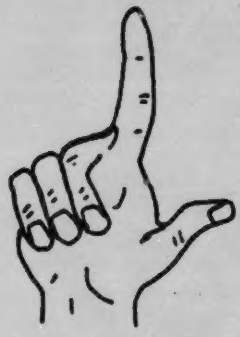
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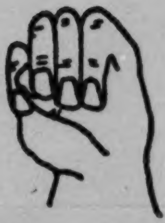

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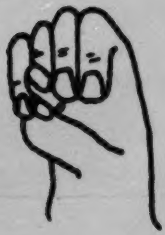

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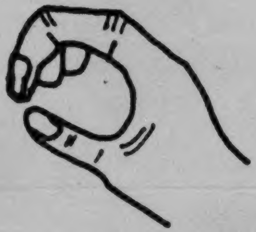

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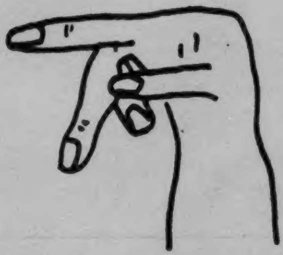

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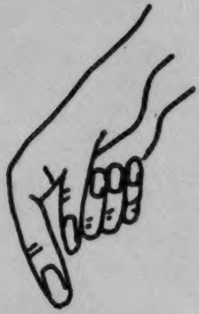

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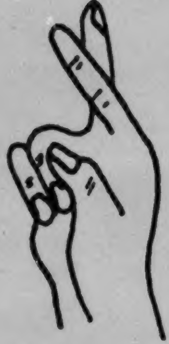

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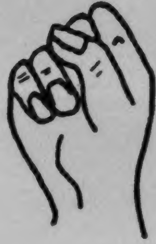

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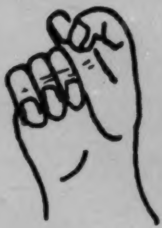

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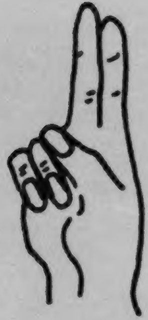

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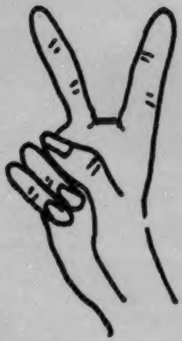

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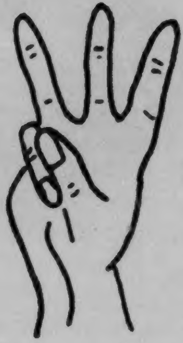

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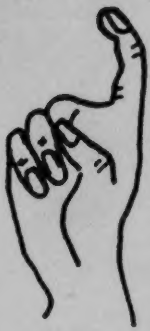

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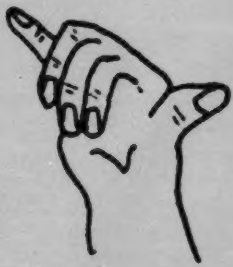

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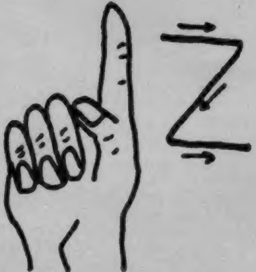


**Z**

## SUGGESTED PROCEDURAL FORMAT FOR IMPLEMENTING M.A.T.C. ACTIVITIES

A framework for generalized skill development, arranged from the simplest to the most difficult communication tasks both receptively and expressively, is provided on pages 16, 17 and 18. Specific goals and objectives, materials and procedures are included for the activities listed in this hierarchy. It is suggested that the following format be utilized when implementing the procedures of these activities:

1. Perform the activity as described under PROCEDURE:
2. Help the student successfully complete a response at the highest level of his/her potential.
3. Reinforce the student as appropriate to his/her needs, i.e. primary/food reinforcer, social reinforcer/ pat on the hand, verbal reinforcer/ "good signing."
4. Record the student's responses on the accompanying data sheets provided in Appendix A using the designated response symbol listed in the key.
5. Give the student ten opportunities to respond per session.
6. Integrate the activity into the student's daily routine in order to facilitate skill generalization.

## M.A.T.C. SIGNING ACTIVITIES

The following activity section provides the format for basic activities when utilizing a M.A.T.C. program. This format includes goals, performance objectives, suggested materials, procedures and vocabulary in both receptive and expressive tasks. It is essential that these activities be carried out in the natural school environment throughout the day in order to facilitate the skill generalization with which autistic students have much difficulty. Appendix A includes activity data sheets. Pictorial displays and written descriptions of sign formulation are contained in Appendix B. These basic materials should serve as a foundation for M.A.T.C. implementation from which modifications are generated to meet the individual needs of the students.

# Food/Activity Exchange

## FOOD OR ACTIVITY EXCHANGE

### RECEPTIVE ACTIVITY

**GOAL:** To improve gesture responses for desired objects
To improve understanding of signed directives

**PERFORMANCE OBJECTIVE:** The student will take, point to, or touch the desired object when the instructor signs and says the directive, "Show me what you want."

**MATERIALS:** Objects: cookie, candy, pop; book, puzzle, block. Optional: One object which is undesirable to the student may be used as a foil.

**PROCEDURE:** Place three or more objects on the table or work surface. Sign and say the directive "Show me what you want." Allow the student to have the item, when an appropriate response has been made. Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**VARIATION:** If a student continues to choose a particular item, ignoring the other choices, remove the item. Do not offer it again until the student has chosen the other items.

**SUGGESTED VOCABULARY:** "I have a ______." (cookie, candy, pop ; puzzle, book, block) "What do you want?" "Show me." See Appendix B for the description of the signs.

### EXPRESSIVE ACTIVITY

**GOAL:** To improve expression of common nouns.

**PERFORMANCE OBJECTIVE:** The student will sign the name of a common object when presented with the object or picture of the object and the instructor signs and says "What is it?"

**MATERIALS:** Same as in the receptive section.

**PROCEDURE:** Place three or more objects or pictures on the table and introduce each by signing and saying "This is .. pop, book, and candy." Point to each item after signing and saying its name to emphasize the association between the sign and object. Then sign and say, "Show me what you want." When the student gesturally designates a choice by taking, touching, or pointing to an item, place the item in front of the student and sign and say "What is it?" Allow the child to have

## EXPRESSIVE ACTIVITY CONTINUED

**PROCEDURE:** the item when the correct sign is given. Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**VARIATION:** Same as in the receptive section.

**SUGGESTED VOCABULARY:** "What is it?" "Tell me the sign." See Appendix B for the description of the signs.

# Noun Activity

## NOUN ACTIVITY

### RECEPTIVE ACTIVITY

**GOAL:** To improve understanding of nouns
To improve understanding of the names of common objects

**PERFORMANCE OBJECTIVE:** The student will take, give, point, to or touch the specific object or pictured object, given a choice of three objects or pictures, when the instructor signs and says, "Show me the (noun).", or "Show me the picture of the (noun)."

**MATERIALS:** Objects or pictures of, cup, book, spoon.

**PROCEDURE:** Place three or more objects or pictures on the table. Introduce the items by signing and saying "This is a cup, book, and a spoon." Point to each item after signing and saying its name to emphasize the association between the sign and object. Then sign and say "Show me the (book)." or "Show me the picture of the (book)." Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**VARIATION:** Objects or pictures are often chosen from the same category, i.e., clothing, toys, food, etc., but similar items are not introduced simultaneously.

**SUGGESTED VOCABULARY:** "Show me the ____." or "Show me the picture of _____." See Appendix B for the description of the signs.

### EXPRESSIVE ACTIVITY

**GOAL:** To improve expression of common nouns

**PERFORMANCE OBJECTIVE:** The student will sign the name of a common object when presented with the object or picture of the object and when the instructor signs and says "What is it?"

**MATERIALS:** Same as in the receptive section.

**PROCEDURE:** Place three or more objects or pictures on the table and introduce each by signing and saying "This is a cup, book, and spoon." Point to each item after signing and saying its name for

## EXPRESSIVE ACTIVITY CONTINUED

**PROCEDURE:** emphasis. Remove the items or pictures from the table. Place one item at a time in front of the student and sign and say, "What is it?" Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**VARIATION:** Same as in the receptive section.

**SUGGESTED VOCABULARY:** "Show me the _____." or "Show me the picture of ____." "This is a _____." See Appendix B for the description of the signs.

# Signed Direction Activity

# SIGNED DIRECTION ACTIVITY -- SET THE TABLE

## RECEPTIVE ACTIVITY

**GOALS:** To improve understanding of simple directions. To improve understanding of signed directions involved in setting the table.

**PERFORMANCE OBJECTIVE:** The student will follow simple directions involved in setting the table when signed and said by the instructor.

**MATERIALS:** Placemat containing the outlines of a plate, cup, spoon, knife, and fork, and the real objects of a plate, cup, spoon, knife, and fork.

**PROCEDURE:** Place three of the objects near the student. The placemat should be behind the three objects and nearer to the instructor. Introduce the items by signing and saying, "This is a plate, a spoon, and a cup." Point to each item after signing and saying its name. Then sign and say the directives listed on the data sheet. Introduce additional objects as needed. Refer to the suggested format on page 31 to complete the activity. See the correlating data sheets in Appendix A.

**VARIATION:** At times it is necessary to rearrange the order of the directives when a student begins to anticipate the order of the commands from memory rather than through comprehension of the specific commands being signed. Modifications of this basic data sheet can be made by adding or deleting items. This same format is used for other daily living skills activities such as washing the face and hands, brushing the teeth, washing dishes, and putting dishes away. Commands can be made more complex by varying the vocabulary.

**SUGGESTED VOCABULARY:** "Show me the ____." "Pick up the ____." "Put it here." "Give me the ____." See Appendix B for the description of the signs.

## EXPRESSIVE ACTIVITY

No expressive counterpart of the activity is used at this stage of development.

# Verb Activity

# VERB ACTIVITY

## RECEPTIVE ACTIVITY

**GOAL:** To improve understanding of verbs
To improve understanding of action verbs

**PERFORMANCE OBJECTIVE** (1) The student will carry out simple actions when the instructor signs and says, "Show me how you (verb)." Verbs: run, sit, drink, eat.
(2) The student will point to or give pictures of common actions when the instructor signs and says, "Show me the picture of (verb)." Verbs: run, sit, drink, eat.

**MATERIALS:** Pictures of common actions.

**PROCEDURES:** (1) The instructor demonstrates an action while signing and saying, "I am (verb + ing)." Then give the student the directive, "Show me how you (verb)."
(2) Place three action pictures on the table. Introduce the verb in each picture by saying the following phrase and signing the verb, "The person (boy/girl/mom,...) is (verb + ing)." As the student becomes accustomed to the verbs the entire phrase may be signed and said. Then sign and say, "Show me the picure of (verb + ing)." Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**SUGGESTED VOCABULARY:** "Show me the picture of ____." "What is the boy/girl doing?" See Appendix B for the description of the signs.

## EXPRESSIVE ACTIVITY

**GOAL:** To improve expression of verbs
To improve expression of common action words

**PERFORMANCE OBJECTIVE:** (1) The student will sign action verbs when the instructor demonstrates an action and signs and says, "What am I doing?" Verbs: sit, eat, drink and run.
(2) The student will sign the verb when presented with an action picture and the instructor signs and says, "What is the person (boy/girl/mom,...) doing?"

**MATERIALS:** Same as in the receptive section.

## EXPRESSIVE ACTIVITY CONTINUED

| | |
|---|---|
| PROCEDURES: | (1) The instructor demonstrates an action while signing and saying, "What am I doing?"<br>(2) Introduce three or more action pictures to the student. Then present the student with one action picture at a time and sign and say "What is the person (boy/girl/mom,...) doing?" Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A. |
| SUGGESTED VOCABULARY: | Verbs. See Appendix B for the description of the signs. |

# Sentence Activity-Reverse Chaining

## SENTENCE ACTIVITY-REVERSE CHAINING

### RECEPTIVE ACTIVITY

No receptive counterpart of this activity is necessary.

### EXPRESSIVE ACTIVITY

| | |
|---|---|
| GOAL: | To improve expressive sentence length<br>To improve expressive sentence structure |
| PERFORMANCE OBJECTIVE: | The student will sign the following sentence structures when the instructor presents an open ended sentence. |
| MATERIALS: | Pictures appropriate to the selected sentence structure (e.g. action pictures) |
| PROCEDURE: | Present the student with a picture depicting the selected sentence structure. The instructor signs and says a question to elicit the desired sentence structure, i.e. "What is the boy doing?" The instructor signs and says an open ended sentence, omitting those sentence structures the student is expected to sign. Refer to the format on page 31 to complete the activity. See the correlating data sheet in Appendix A. |
| SUGGESTED VOCABULARY: | "What is the boy/girl doing?" "The boy/girl is (verb)." See Appendix B for the description of the signs. |

# "What" Question Activity

## "WHAT" QUESTIONS - NOUN ANSWERS

### RECEPTIVE ACTIVITY

**GOAL:** To improve understanding of "what" questions that require a noun answer.

**PERFORMANCE OBJECTIVE:** Given a choice of three noun pictures, the student will respond to "what" questions that require a noun answer by choosing the appropriate picture.

**MATERIALS:** Noun pictures

**PROCEDURE:** Place three noun pictures on the table. Sign and ask a "what" question that requires a noun answer such as "What do you eat?" Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A.

**SUGGESTED VOCABULARY:** "What do you (verb)?" "Show me the picture." See Appendix B for the description of the signs.

### EXPRESSIVE ACTIVITY

**GOAL:** To improve expressive responses to "what" questions that require a noun answer

**PERFORMANCE OBJECTIVE:** The student will sign the appropriate noun when asked a "what" question that requires a noun answer with/without a picture cue.

**MATERIALS:** Noun pictures

**PROCEDURE:** Follow the procedure by instructing the student to choose a noun picture in response to a signed and asked "what" question. Once the student has chosen the appropriate picture, sign and say "What is it?" Remove the stimulus of the picture cue and ask the "what" questions, when the student is familiar with the questions and responses. Refer to the suggested format on page to complete the activity. See the correlating data sheet in Appendix A on page .

**SUGGESTED VOCABULARY:** "What do you (verb)?" "Tell me the sign." See Appendix B for the description of the signs.

# "WHAT" QUESTIONS VERB ANSWERS

## RECEPTIVE ACTIVITY

**GOAL:** To improve understanding of "what" questions that require a verb answer.

**PERFORMANCE OBJECTIVE:** Given a choice of 3 action pictures, the student will respond to "what" questions that require a verb answer by choosing the appropriate action picture.

**MATERIALS:** Action pictures

**PROCEDURE:** Place 3 action pictures on the table. Sign and ask a "what" question that requires a verb answer such as, "What do you do with a (cookie)?" Refer to the suggested format on page 31 to complete the activity. See the correlating data sheets in Appendix A.

**SUGGESTED VOCABULARY:** "What do you do with a (noun)?" "Show me the picture." See Appendix B for the description of the signs.

## EXPRESSIVE ACTIVITY

**GOAL:** To improve expressive responses to "what" questions that require a verb answer.

**PERFORMANCE OBJECTIVE:** The student will sign the appropriate verb when asked a "what" question that requires a verb answer with/without a picture cue.

**MATERIALS:** Action pictures

**PROCEDURE:** Follow the receptive procedure in instructing the student choose an action picture in response to a signed and asked "what" question. Once the student has chosen the appropriate picture, sign and say "What do you do with a (noun)?" Remove the stimulus of the picture cue and ask the "what" questions when the student has become familiar with the questions and responses. Refer to the suggested format on page 31 to complete this activity. See the correlating data sheets in Appendix A.

**SUGGESTED VOCABULARY:** "What do you do with a (noun)?" "Tell me the sign." See Appendix B for the description of signs.

# Preposition Activity

## PREPOSITION ACTIVITY

### RECEPTIVE ACTIVITY

**GOAL:** To improve understanding of prepositions

**PERFORMANCE OBJECTIVE:** (1) The student will place objects in designated spatial relationships when prepositional commands are signed and said by the instructor. Prepositions: in, on, under.
(2) The student will choose pictures depicting designated spatial relationships when prepositional commands are signed and said by the instructor. Prepositions: in, on, under.

**MATERIALS:** Block, box, environmental objects, small toys. Sentence strip with noun and preposition word cards, wooden blocks with prepositions on one block and nouns printed on the other block. Preposition or spatial relations picture cards.

**PROCEDURES:** (1) Instruct the student to place an object such as a block in, on, or under a box. Sign and say the directive "Put the block (under) the box." Refer to the suggested format on page 31 to complete the activity.
(2) Prepare a wooden cube by printing the prepositions, in, on, and under, one word on each side of the cube. Prepare a second wooden cube by printing the names of the chosen toys; car, ball, crayon. Print a sentence strip containing the words "The ____ is ____ the box." Then print a word card for each preposition and each toy word. Place all materials on the table (box, 3 toys, 2 wooden cubes, sentence strip and word cards.) Instruct the student to "roll" the toy cube and read/sign the toy word on the cube. The student then finds the matching word card and places it in the first blank on the sentence strip. The student must then choose the appropriate toy from a group of three or more toys and place it near him/her. Instruct the student to "roll" the preposition cube and then place the matching preposition word card on the sentence strip. Sign and say the entire sentence for the student if he/she cannot sign it. The student must then place the toy in the appropriate position in space in relation to the box. Refer to the suggested format on page 31 to complete the activity.

## RECEPTIVE ACTIVITY CONTINUED

**PROCEDURES:** (3) Place three or more preposition/spatial relations picture cards on the table. Sign and say the directive "Find the picture where the (object) is (preposition) the (object)." (Example: Find the picture where the book is under the chair.) Refer to the suggested format on page 31 to complete the activity. See the correlating data sheets in Appendix A.

**SUGGESTED VOCABULARY:** "Put the (noun) (preposition) the box." "In", "on," "under." "Where is it?" "Tell me." See Appendix B for the description of the signs.

## EXPRESSIVE ACTIVITY:

**GOAL:** To improve expression of prepositions

**PERFORMANCE OBJECTIVE:** (1) The student will sign the appropriate preposition when an object is placed in a specific position and the instructor signs and says "Where is the (object)?"
(2) The student will sign the appropriate preposition when shown a picture depicting a spatial relationship and the instructor signs and says "Where is the (object)?"

**MATERIALS:** Same as in the receptive section.

**PROCEDURES:** (1) Place a block or small toy in a position in space such as in, on, or under a box. Sign and say, "Where is the (object)?" Refer to the suggested format on page 31 to complete the activity.
(2) Repeat receptive procedure number two. Sign and say "Where is the object?" Refer to the suggested format on page 31 to complete the activity.
(3) Present a spatial relationship picture card. Sign and say "Where is the (object)? Refer to suggested format on page 31 to complete the activity. See the correlating data sheets in Appendix A.

**SUGGESTED VOCABULARY:** Same as the receptive activity. See Appendix B for the description of the signs.

# Signing Throughout the Day

## SIGNING THROUGHOUT THE DAY

### RECEPTIVE ACTIVITY

| | |
|---|---|
| GOAL: | To improve understanding of simple directives used throughout the day |
| PERFORMANCE OBJECTIVE: | The student will respond to the following directives throughout the day when signed and said by the instructor. (See data sheet for specific directives.) |
| MATERIALS: | Classroom environment |
| PROCEDURES: | Sign and say the listed directives when appropriate throughout the day. Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A |
| SUGGESTED VOCABULARY: | "Stand up," "sit down," "come here," "go to the bathroom," "time for gym," "yes/no," "help," "more." See Appendix B for the description of the signs. |

### EXPRESSIVE ACTIVITY

| | |
|---|---|
| GOAL: | To improve expression of basic wants and needs |
| PERFORMANCE OBJECTIVE | The student will sign the following one-word utterances throughout the day when appropriate with/without the presentation of a stimulus question. Signed utterances: Bathroom, help, more, gym, yes/no. |
| MATERIALS: | Classroom environment |
| PROCEDURES: | Present the student with the opportunities to express the listed signed utterances. Should the student not sign these in appropriate situations, present the student with a stimulus question and help him/her respond with the appropriate sign. Refer to the suggested format on page 31 to complete the activity. See the correlating data sheet in Appendix A. |
| SUGGESTED VOCABULARY: | Same as in the receptive activity. See Appendix B for the description of the signs. |

# Model for the Delivery of Services

# MODEL FOR DELIVERY OF SERVICES TO STUDENTS IN M.A.T.C. PROGRAM

In a setting for the autistic or severely impaired students, a language or communication program is usually the primary source of cognitive goals and objectives for each student's Individual Educational Plan. The rationale for this is based on two premises: communication is the basis for learning and "communication learning" attacks the most disabling features of autism. These features include: (1) severely impaired language, (2) perceptual disorders, (3) lack of development of the prerequisite learning behaviors and (4) lack of ability to relate to people, events, and objects due to behavioral, perceptual, and language impairments. Consequently, language or communication training is a primary focus of the daily curriculum.

In order to most effectively service the students of a program for the autistic or severely impaired, the Speech and Language Clinicians most effectively function as diagnostic and prescriptive clincians and then as curriculum consultants. First, it is essential that the student's language or communication skills are assessed by the Speech and Language Clinician. Considerations of the students' age, level of communicative functioning, cognitive abilities, and prognosis are weighed before placement in a M.A.T.C. program is recommended. The Speech and Language Clinician, with input from parents and classroom teachers then prepares goals and objectives for the student's Individual Educational Plan. The purpose of these goals and objectives is to facilitate the development of receptive and expressive communication skills appropriate to the student's needs and developmental level. The Speech and Language Clinican should also have an ongoing involvement in the student's program by conducting an examination of the monthly data reports on goals and objectives, classroom observations, teachers conferences, parental contacts, and individual or small group sessions with the students to monitor their progress. These are all used to monitor a student's M.A.T.C. program and make appropriate adjustments as needed.

When goals and objectives have been established, the Speech and Language Clinician should begin to act as a curriculum consultant by training and inservicing the classroom teacher(s), paraprofessional(s), and parents in carrying out simple activities and communication exchanges. These are implemented throughout the day in the student's natural environments, the home and classroom, and correlate with the goals and objectives written for that student. Training and inservicing, as provided by the Speech and Language Clinician should include: (1) dissemination of a description of M.A.T.C. with a generalized rationale for its use, (2) training sessions in the production of the manual alphabet and a vocabulary of simple signs and sentences, (3) training in how to use M.A.T.C. throughout the day in the home and school environments and (4) training in activities and procedures necessary to fulfill the requirements of the student's

Individual Educational Plan. Individual or small group training sessions for teachers and parents must be provided for highly specialized activity or vocabulary needs.

# Appendix A

## M.A.T.C. DATA SHEET

### FOOD OR ACTIVITY EXCHANGE

Student: ____________________

Performance Objective

RECEPTIVE: The student will take, point to, or touch the desired object when the instructor signs and says the directive, "Show me what you want."

EXPRESSIVE: The student will sign the name of a common object when presented with the object or picture of the object and the instructor signs and says "What is it?"

| SPECIFIC TASKS / Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. cookie | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. candy | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. pop | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. candy | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. cookie | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. pop | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. cookie | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. pop | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. candy | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. cookie | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### NOUN ACTIVITY

**Student:** ______________________

**Performance Objective** ______________________

RECEPTIVE: The student will take, give, point to, or touch the specified object or pictured object, given a choice of three objects or pictures, when the instructor signs and says, "Show me the (noun)." or "Show me the picture of the (noun)."

EXPRESSIVE: The student will sign the name of a common object when presented with the object or picture of the object and when the instructor signs and says "What is it?"

| Dates<br>SPECIFIC TASKS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. spoon | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. cup | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. plate | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. cup | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. spoon | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. plate | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. spoon | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. cup | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. plate | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. spoon | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

SIGNED DIRECTION ACTIVITY -
SET THE TABLE

**Student:** ____________________

**Performance Objective** RECEPTIVE: The student will follow simple directions involved in setting the table when signed and said by the instructor.

| SPECIFIC TASKS / Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Pick up the plate | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Pick up the spoon. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Pick up the cup. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Pick up the fork. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Pick up the knife. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key:
S = spontaneous
c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic
I = imitated
M = manipulated

## M.A.T.C. DATA SHEET

Student:__________________

Performance Objective RECEPTIVE - SET THE TABLE (continued)

| SPECIFIC TASKS / Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11. Give me the cup. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Give me the spoon. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13. Give me the fork. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14. Give me the plate. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15. Give me the knife. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### SIGNED DIRECTION ACTIVITY - TOOTHBRUSHING

Student: ____________________

Performance Objective RECEPTIVE: The student will follow simple directions involved in toothbrushing when signed and said by the instructor.

| SPECIFIC TASKS / Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Get your toothbrush. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Get the toothpaste. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Turn the water on. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Put the toothbrush in water | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Put some toothpaste on the toothbrush. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Brush your teeth. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Do you want a drink? ( response) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Put the toothbrush in the water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Put the top on the toothpaste. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. Put the toothpaste and toothbrush in the cupboard. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### SIGNED DIRECTION ACTIVITY
### WASH YOUR HANDS

**Student:** ____________________

**Performance Objective** RECEPTIVE: The student will follow simple directions involved in washing his/her hands when signed and said by the instructor.

| Dates<br>SPECIFIC TASKS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Turn the water on. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Put your hands in the water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Pick up the soap. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Rub the soap. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Put the soap down. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Wash your hands. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Wash your fingers. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Put your hands in the water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Turn the water off. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. Dry your hands with the towel. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

SIGNED DIRECTION DATA - WASH THE TABLE

**Student:** ____________________

**Performance Objective** RECEPTIVE: The student will follow simple directions involved in washing tables when signed and said by the instructor.

| SPECIFIC TASKS / Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Get the sponge. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Turn the water on. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Put the sponge in the water | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Squeeze the sponge. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Go wash the table. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Put the sponge away. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### SIGNED DIRECTION ACTIVITY
### WASH THE DISHES

**Student:** ____________________

**Performance Objective** RECEPTIVE: The student will follow simple directions involved in washing the dishes when signed and said by the instructor.

| Dates<br>SPECIFIC TASKS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Get the dishpan. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Turn on the water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Pour in the dish soap. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Turn the water off. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Put the dishes in. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Wash the _______ with the sponge. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Put the _________ in this rinse water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Take the ________ out of the rinse water. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. Put it here to dry. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

SIGNED DIRECTION ACTIVITY
PUTTING THE DISHES AWAY

**Student:** ____________________

**Performance Objective** RECEPTIVE: The student will follow simple directions involved in putting dishes away when signed and said by the instructor.

| **SPECIFIC TASKS** Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Put the plate(s) on this shelf. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Put the bowls on this shelf. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Put the cups on this shelf. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Put the knives here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Put the spoons here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Put the forks here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Put the can opener here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Put this pan on that shelf. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET
### VERB ACTIVITY

**Student:** ____________________

**Performance Objective** RECEPTIVE: (1) The student will carry out simple actions when the instructor signs and says, "Show me how you (verb)."
(2) The student will point to or give pictures of common actions when the instructor signs and says, "Show me the picture of (verb)."

| **SPECIFIC TASKS** **Dates** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. eat | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. drink | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. eat | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. drink | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS:** **Spontaneous** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Cued** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Imitated** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Manipulated** | | | | | | | | | | | | | | | | | | | | | | | | | |

**Key:** S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic
I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### VERB ACTIVITY

**Student:** ____________________

**Performance Objective** EXPRESSIVE: (1) The student will sign action verbs when the instructor demonstrates an action and signs and says, "What am I doing?" (2) The student will sign the verb when presented with an action picture and the instructor signs and says, "What is the person (boy/girl/mom,...) doing?"

| SPECIFIC TASKS | Dates | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. eat | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. drink | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. eat | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. drink | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. run | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. sit | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### SENTENCE ACTIVITY - REVERSE CHAINING

**Student:** ____________________

**Performance Objective** EXPRESSIVE: The student will sign the following sentence structures when the instructor presents an open ended sentence.
Specific sentence structures: The noun is verbing

| Dates | The | noun | is | verb | ing | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPECIFIC TASKS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS:** Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

"WHAT" QUESTIONS - NOUN ANSWERS

**Student:** ____________________

**Performance Objective** RECEPTIVE: Given a choice of three noun pictures, the student will respond to "what" questions that require a noun answer by choosing the appropriate picture.

EXPRESSIVE: The student will sign the appropriate noun when asked a "what" question that requires a noun answer with/without a picture cue.

| SPECIFIC TASKS | Dates | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. What do you eat? (cookie) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. What do you sleep in? (bed) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. What do you wear on your head? (hat/cap) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. What do you ride to school in? (bus/cab) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. What do you drink? (milk) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. What do you sit on? (chair) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. What do you write with? (pencil) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. What do you color on? (paper) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. What do you cut with? (scissors) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. What do you play with? (toy) | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

"WHAT QUESTIONS - VERB ANSWERS

Student: ____________________

Performance Objective

RECEPTIVE: Given a choice of 3 action pictures, the student will respond to "what" questions that require a verb answer by choosing the appropriate action picture.

EXPRESSIVE: The student will sign the appropriate verb when asked a "what" question that requires a verb answer with/without a picture cue.

| SPECIFIC TASKS Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. What do you do with a sandwich? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. What do you do in bed? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. What do you do with a coat? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. What do you do with a car? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. What do you do with pop? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. What do you do with a crayon? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. What do you do with a chair? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. What do you do with scissors? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. What do you do with a book? | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. What do you do with a spoon? | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous

c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated

M = manipulated

## M.A.T.C. DATA SHEET

### PREPOSITION ACTIVITY

**Student:** ____________________

**Performance Objective** RECEPTIVE: (1) The student will place objects in designated spatial relationships when prepositional commands are signed and said by the instructor. Prepositions: in, on, under.
(2) The student will choose pictures depicting designated spatial relationships when prepositional commands are signed and said by instructor.

| SPECIFIC TASKS Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic
I = imitated M = manipulated

## M.A.T.C. DATA SHEET

### PREPOSITION ACTIVITY

Student:____________________

Performance Objective EXPRESSIVE: (1) The student will sign the appropriate preposition when and object is placed in a specific position and the instructor signs and says "Where is the (object)?"

(2) The student will sign the appropriate preposition when shown a picture depicting a spatial relationship and the instructor signs and says "Where is the (object)?'

| SPECIFIC TASKS Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. in | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. under | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. on | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

## M.A.T.C. DATA SHEET

**Student:** ____________________

SIGNING THROUGHOUT THE DAY

**Performance Objective** RECEPTIVE: The student will respond to the following directive throughout the day when signed and said by the instructor.

| Dates<br>SPECIFIC TASKS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Stand up. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Sit down. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Come here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Go to the bathroom. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Sit on the carpet. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Put your coat here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Line up by the door. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Give it to me. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Put it here. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. Get the cup. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

Key: S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

**M.A.T.C. DATA SHEET**
SIGNING THROUGHOUT THE DAY

**Student:** ____________________

**Performance Objective** EXPRESSIVE: The student will sign the following one word utterances throughout the day when appropriate with/without the presentation of stimulus questions.

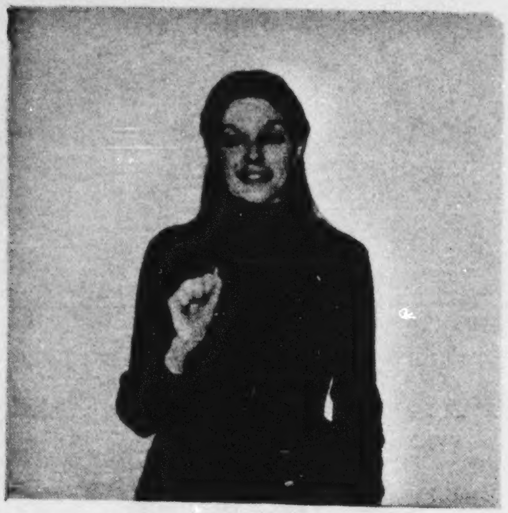
| **SPECIFIC TASKS** Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Bathroom | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Help | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. More | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Gym | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Yes/no | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: Spontaneous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cued | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imitated | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manipulated | | | | | | | | | | | | | | | | | | | | | | | | | |

**Key:** S = spontaneous c = cued: (1) sign, (2) verbal, (3) physical, (4) phonetic

I = imitated M = manipulated

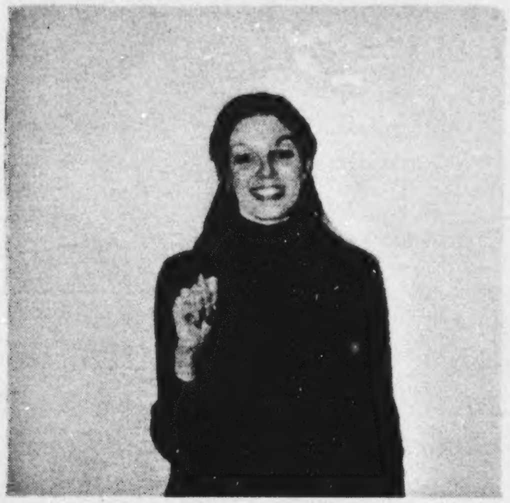
# Appendix B

## A



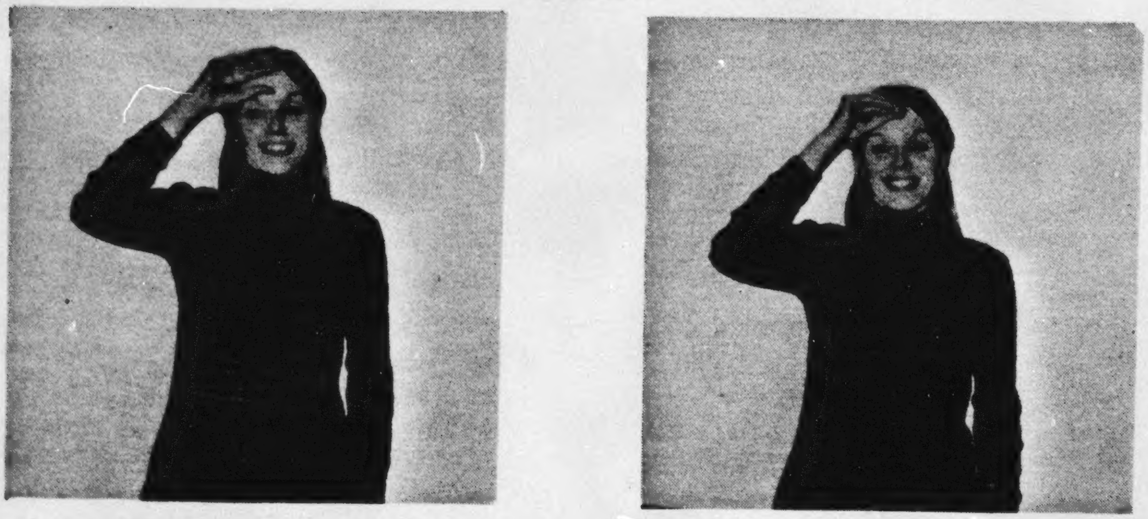
Dominant hand forms the letter (A). Move (A) hand slightly to right.

## BATHROOM



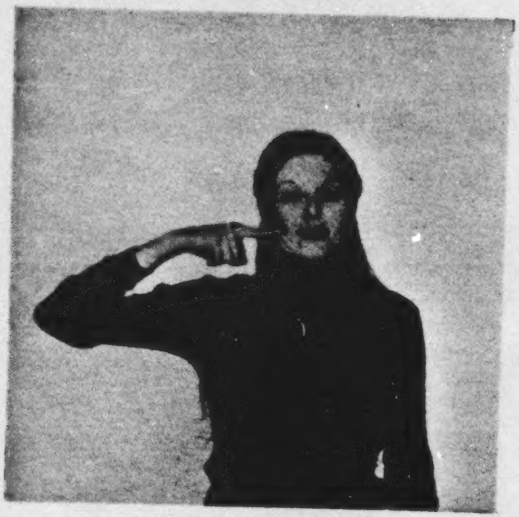
Dominant hand forms the letter (T). Shake it back and forth.

## BOY



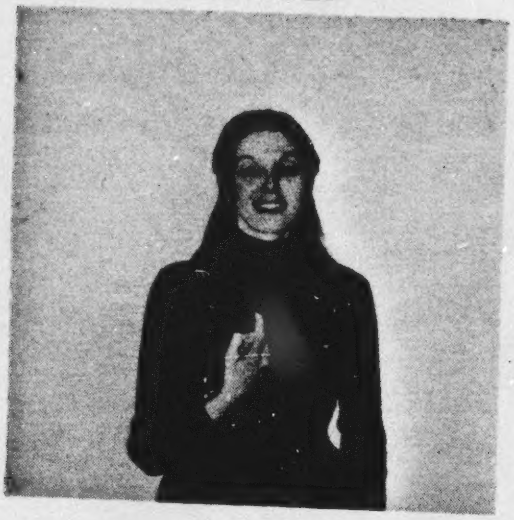
Dominant hand rests near the forehead, in a flat (C) hand. Pinch the four fingers to the thumb.

## CANDY



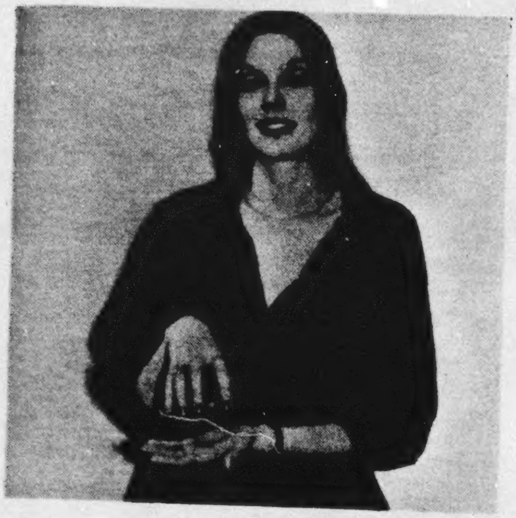
Index finger of the dominant hand makes a twisting motion on the cheek.

## COME



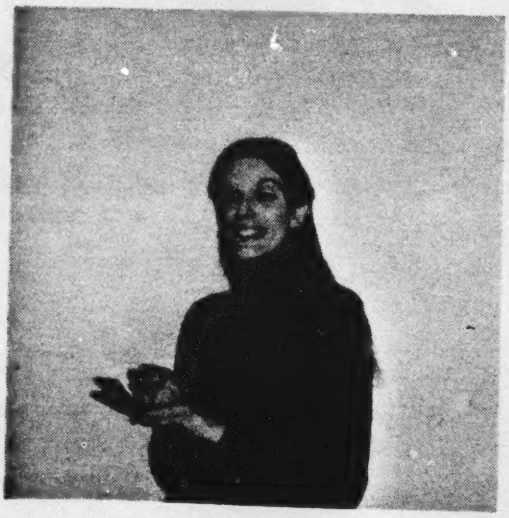
Palm-up index of dominant hand points upward. Finger and forearm curl inward as if calling desired person.

## COOKIE



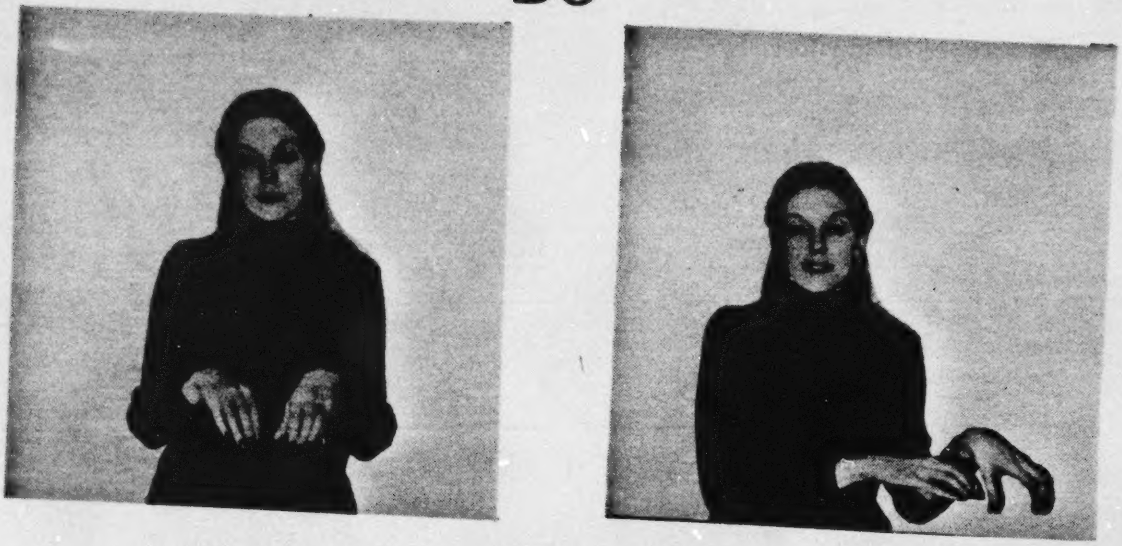
Dominant hand in (C) position makes left-right twisting motion in the palm of the non-dominant hand.

## CUP



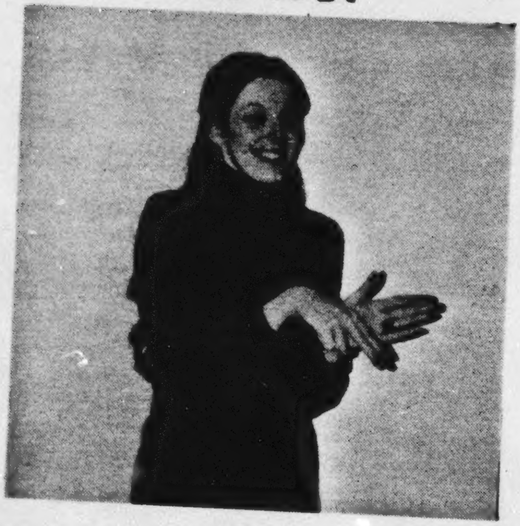
Non-dominant hand is extended with palm face-up. The dominant hand forms the letter (C). The (C) hand begins on the palm of the non-dominant hand and is lifted upward slightly.

## DO



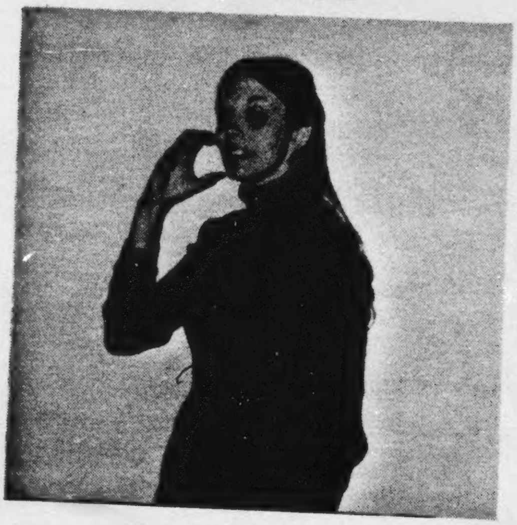
Both hands form the letter (C) with the palms face down. Begin at the midline, slide to the left then back to the midline.

## DOWN



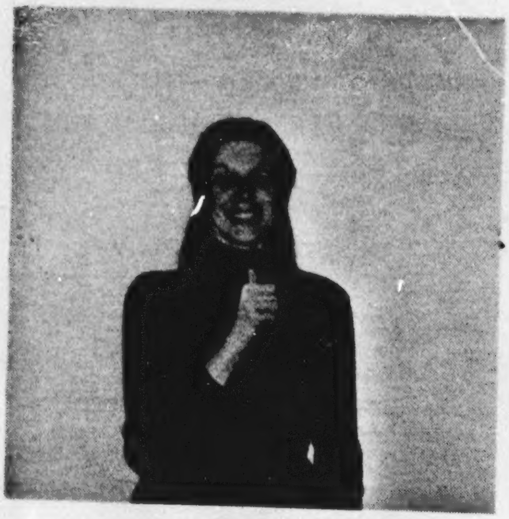
Non-dominant hand, face-in is perpendicular to the body. Dominant hand in an (H) position slides downward and away across palm of non-dominant hand.

## DRINK



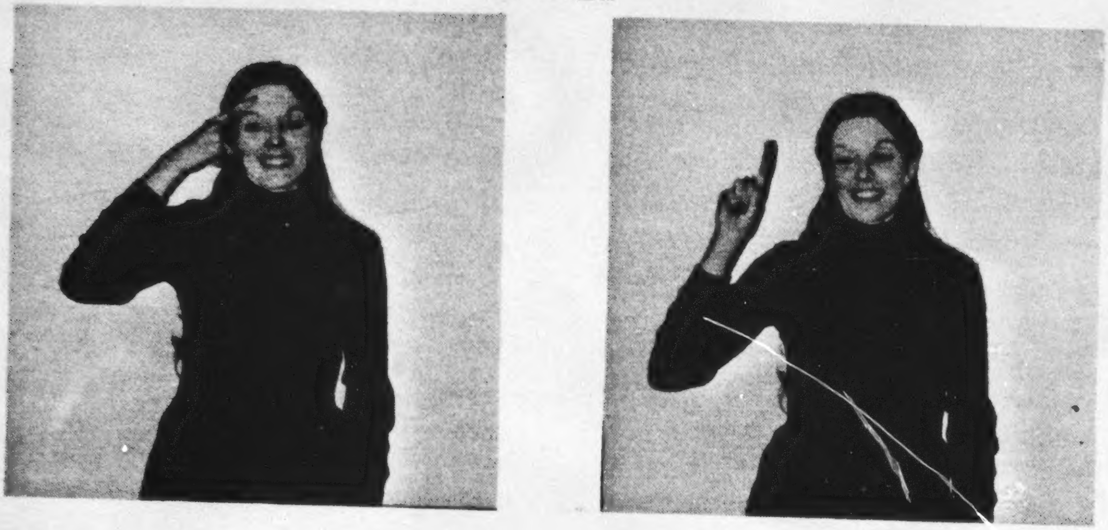
Dominant hand forms the letter (C). Place (C) hand near mouth with thumb on chin tipping it upward as if drinking.

## EAT



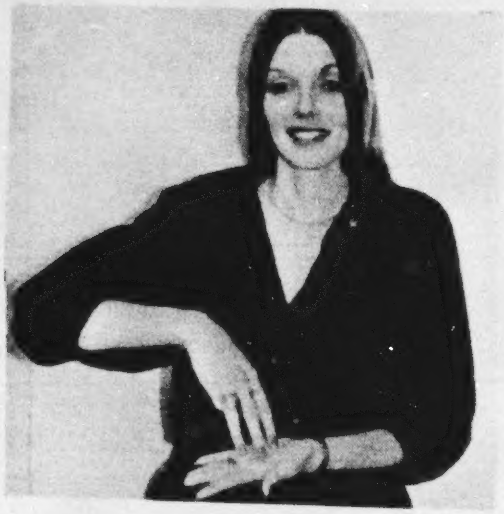
Dominant hand forms the letter (A). (A) hand circles away from the mouth.

## FOR



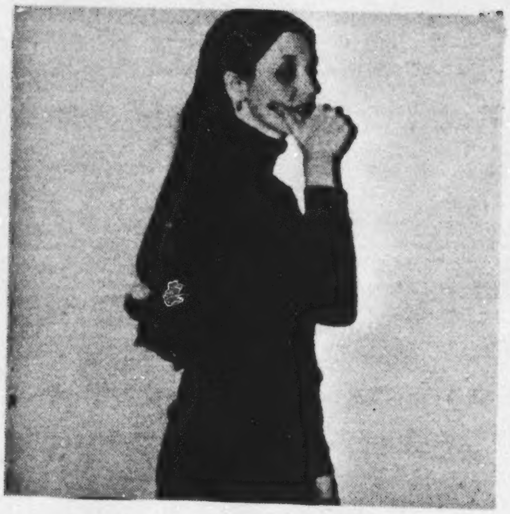
Index finger of the dominant hand begins on forehand and twists until palm is facing out.

## FORK



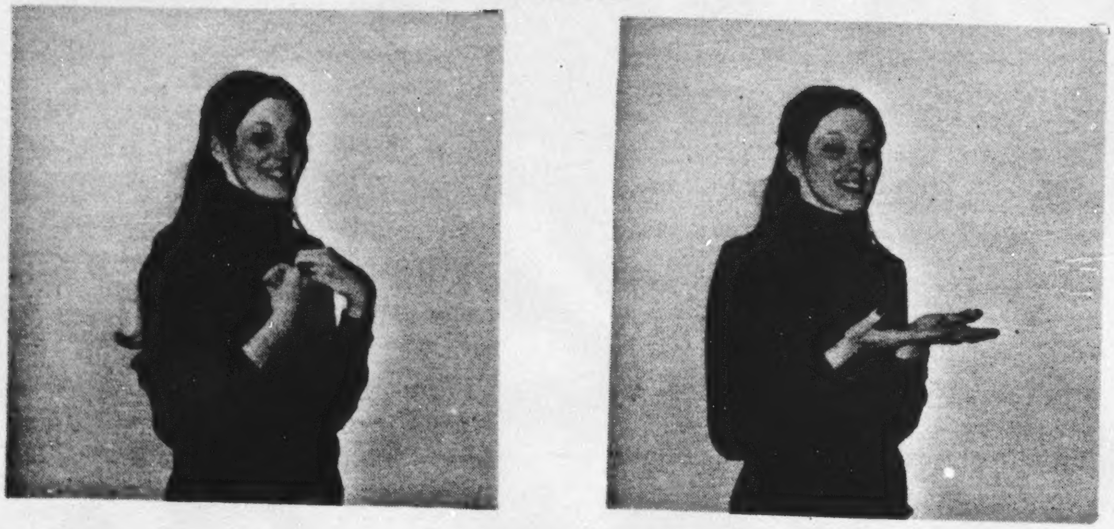
Non-dominant hand is extended with palm face up. Stab the non-dominant palm with three middle fingers of the dominant hand (W).

## GIRL



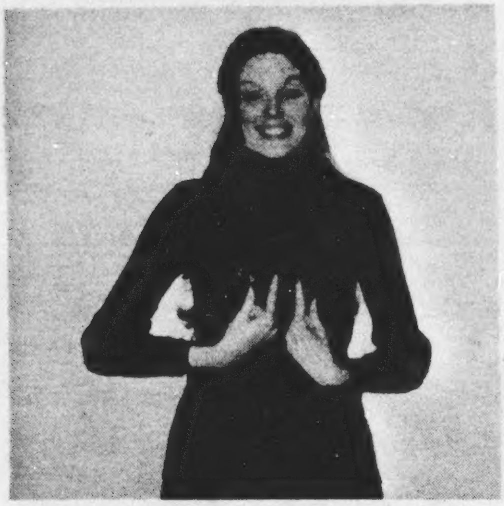
Dominant hand forms the letter (A). Thumb of the (A) hand moves down the jaw line as if drawing a curl.

## GIVE



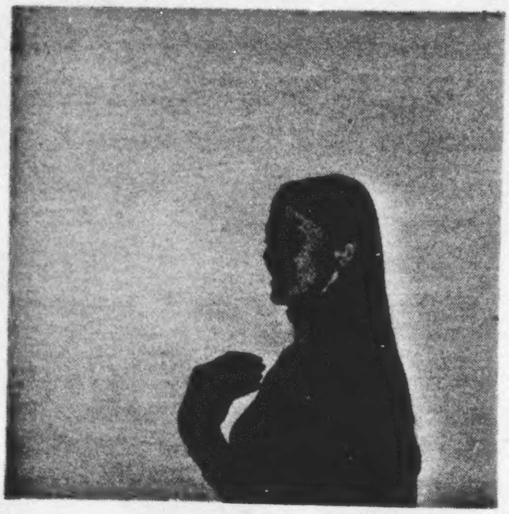
Two (O) hands touch chest then extend to palm up.

## GO



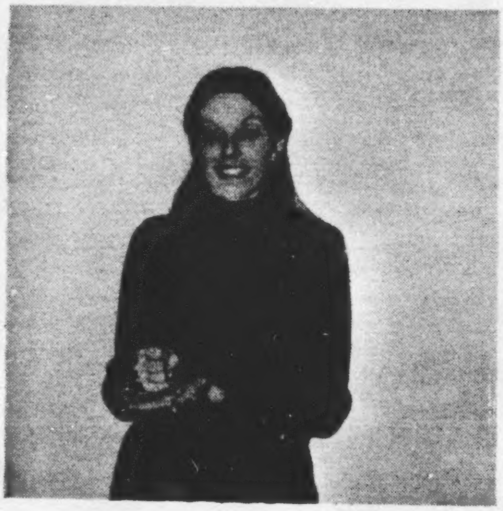
Both hands form the letter (G), then roll downward together to point outward.

## HAVE



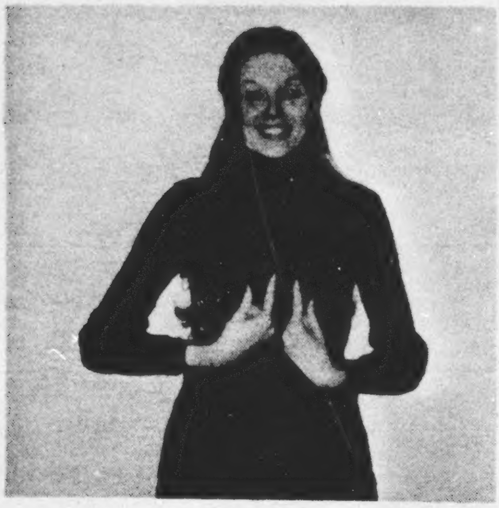
Both hands form palm up letter (C). Bring (C) hands inward to touch chest.

## HELP



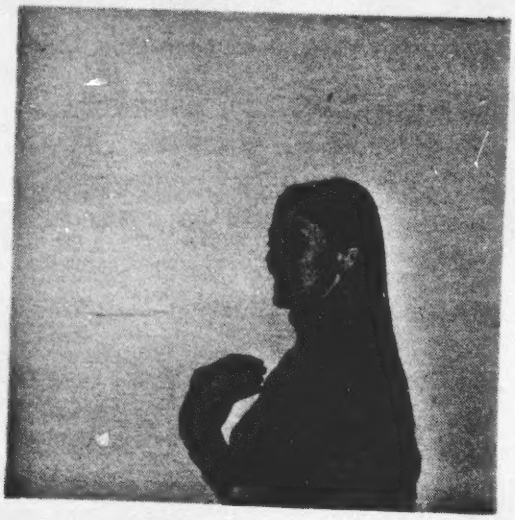
Nondominant hand palm face up. Dominant hand in (S) position sits on palm of non-dominant hand. Lift both upward.

## GO



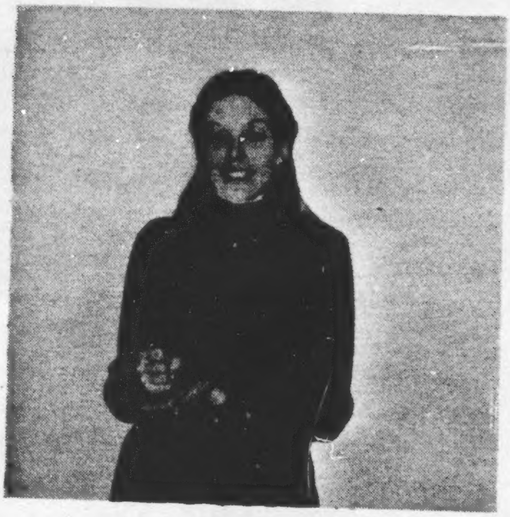
Both hands form the letter (G), then roll downward together to point outward.

## HAVE



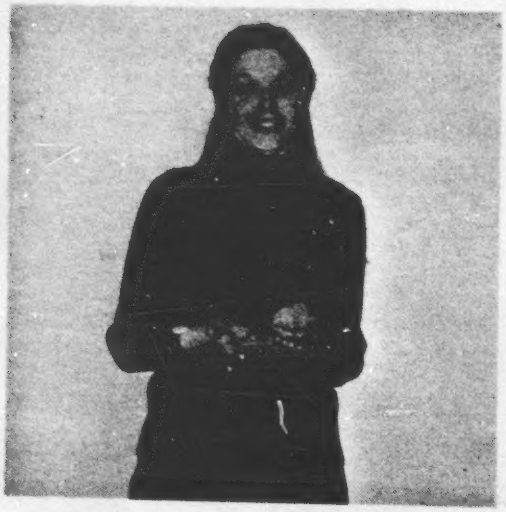
Both hands form palm up letter (C). Bring (C) hands inward to touch chest.

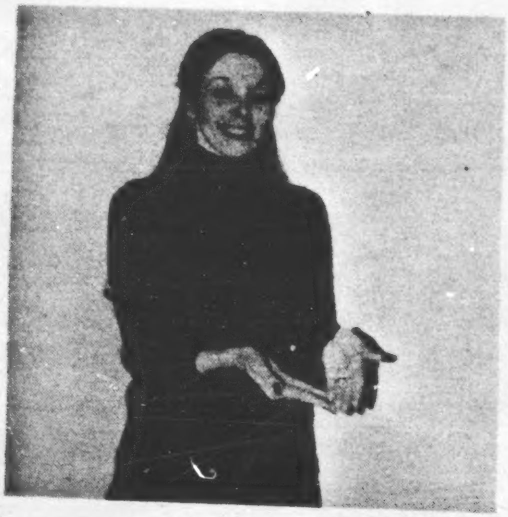
## HELP



Nondominant hand palm face up. Dominant hand in (S) position sits on palm of non-dominant hand. Lift both upward.

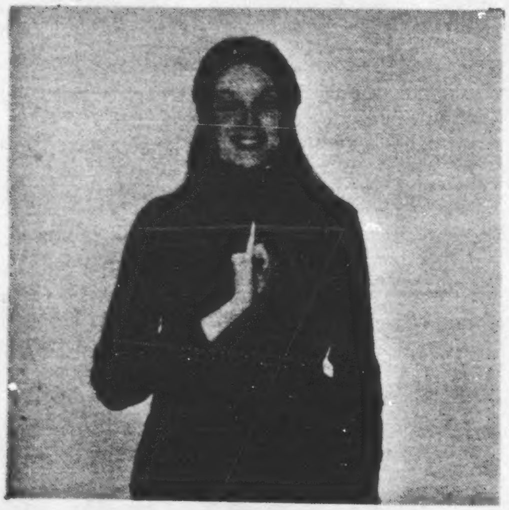
## HERE





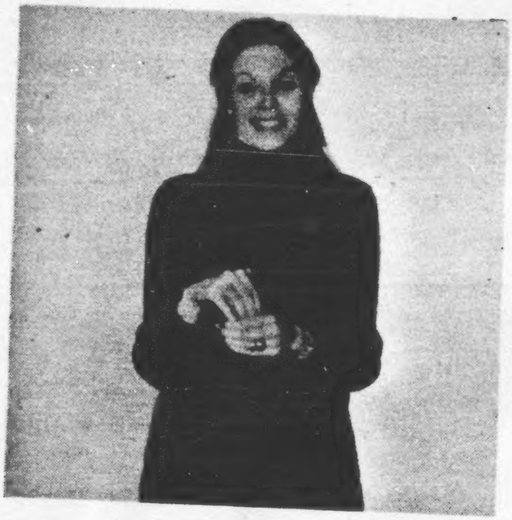
Palms of both hands face up. Hands circle outward from body until fingertips touch to point to desired area.

## I



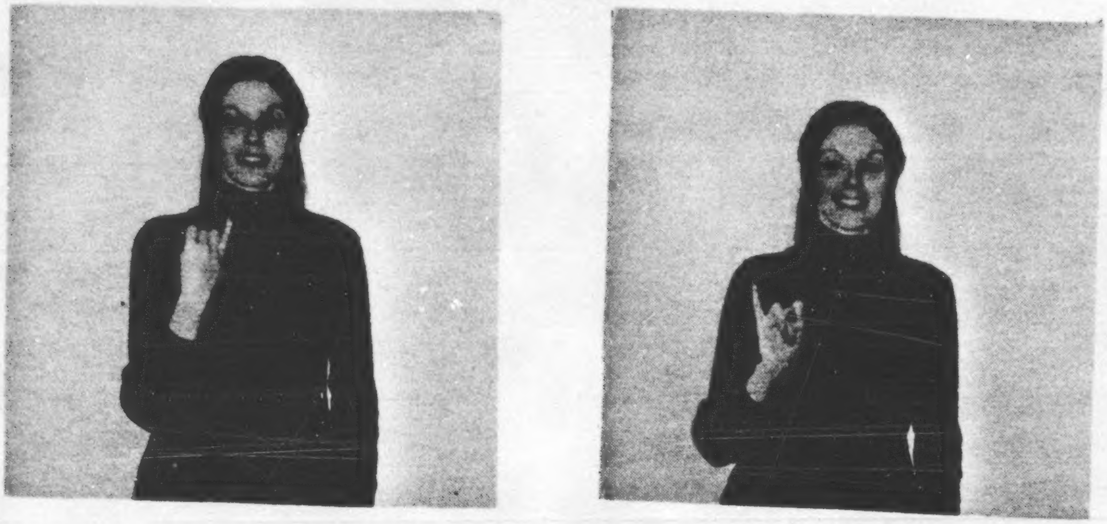
Dominant hand forms the letter (I). Touch (I) hand to chest.

## IN



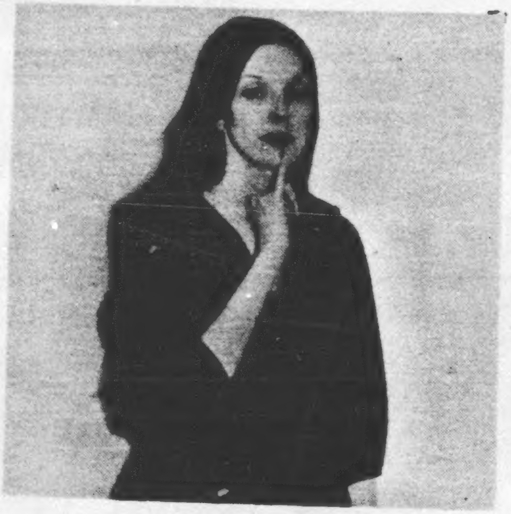
Non-dominant hand forms the letter (O). Fingertips of the dominant hand enters into the (O) of the non-dominant hand.

## -ING



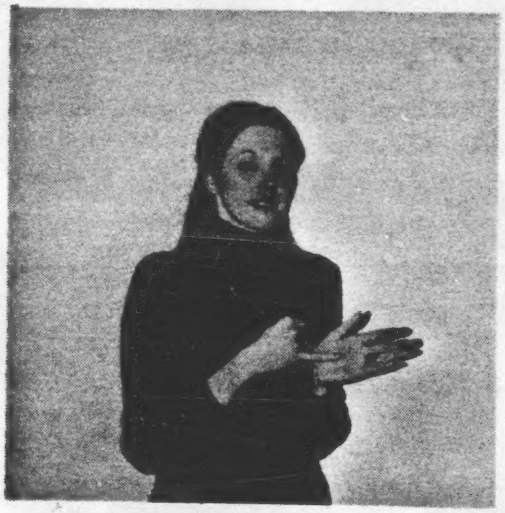
(I) hand faces palm-in. Twist to palm-out.

## IS



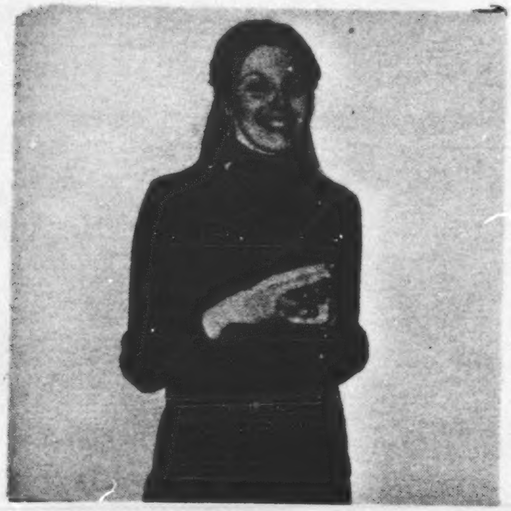
Dominant hand forms the letter (I). (I) hand begins on the chin and moves outward.

## IT



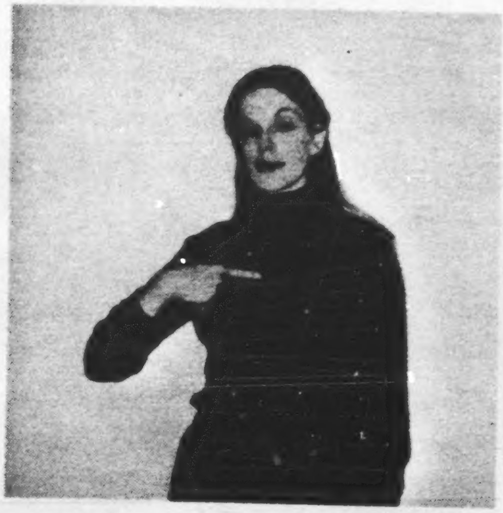
Dominant hand forms the letter (I). Tip of the (I) finger flicks inward from the palm of the non-dominant hand.

## KNIFE



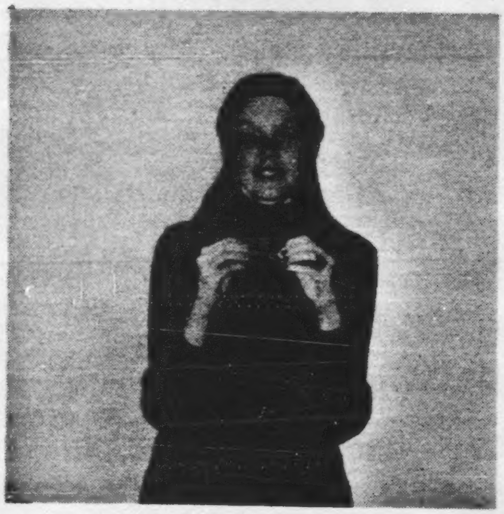
Both hands form the letter (H). The dominant (H) hand flicks off the non-dominant hand twice.

## ME



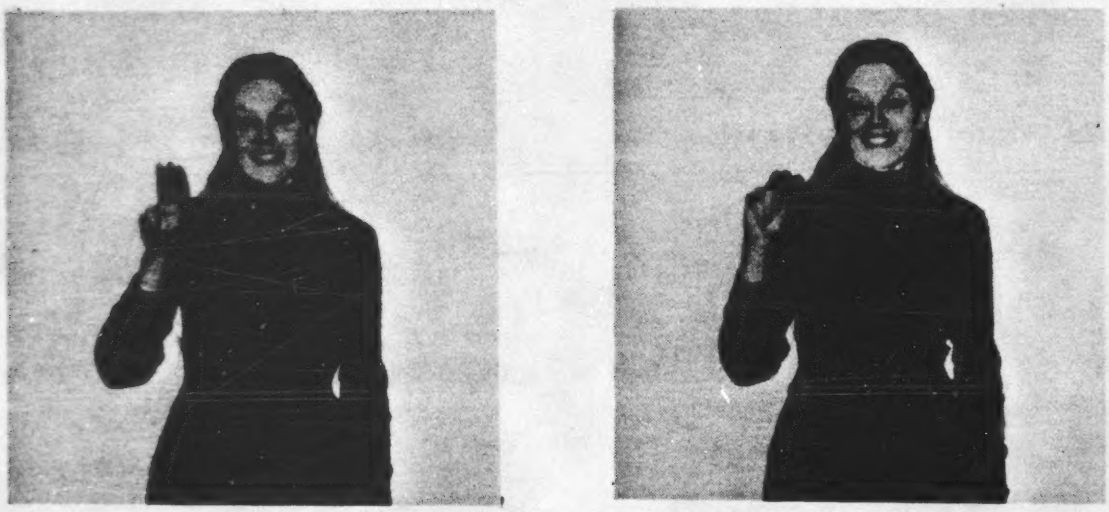
Index finger of the dominant hand points to and touches the chest.

## MORE



Both hands form flat (O's). Bounce the tips together twice.

## NO

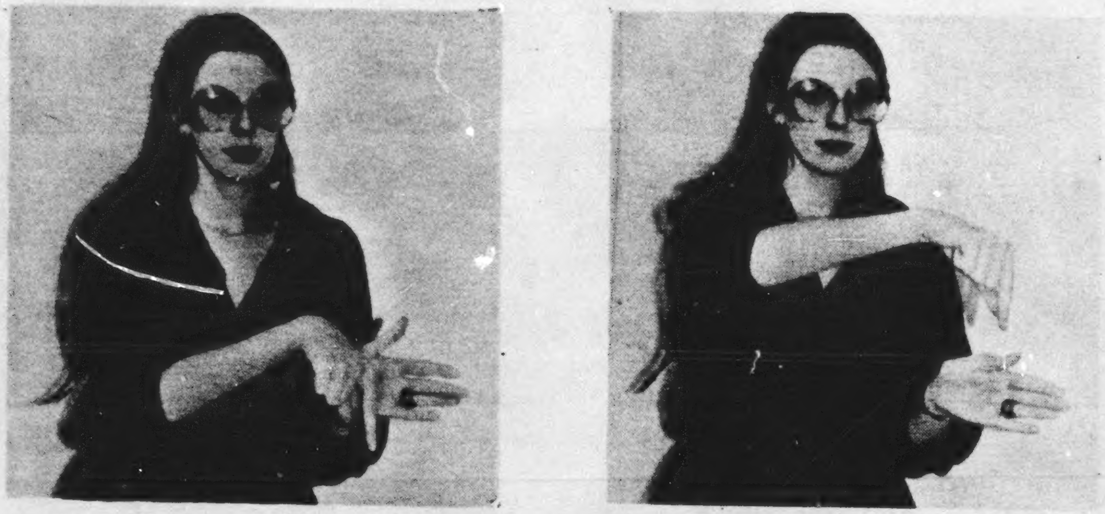


Index and middle fingers of the dominant hand close onto thumb.

## ON

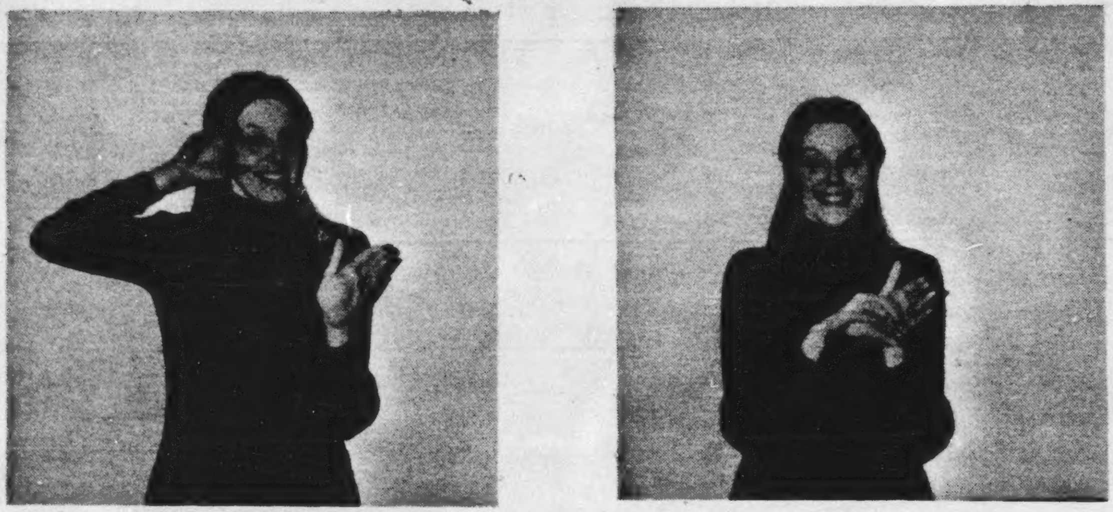
Palm of the dominant hand touches the back of the non-dominant hand.

# PICK



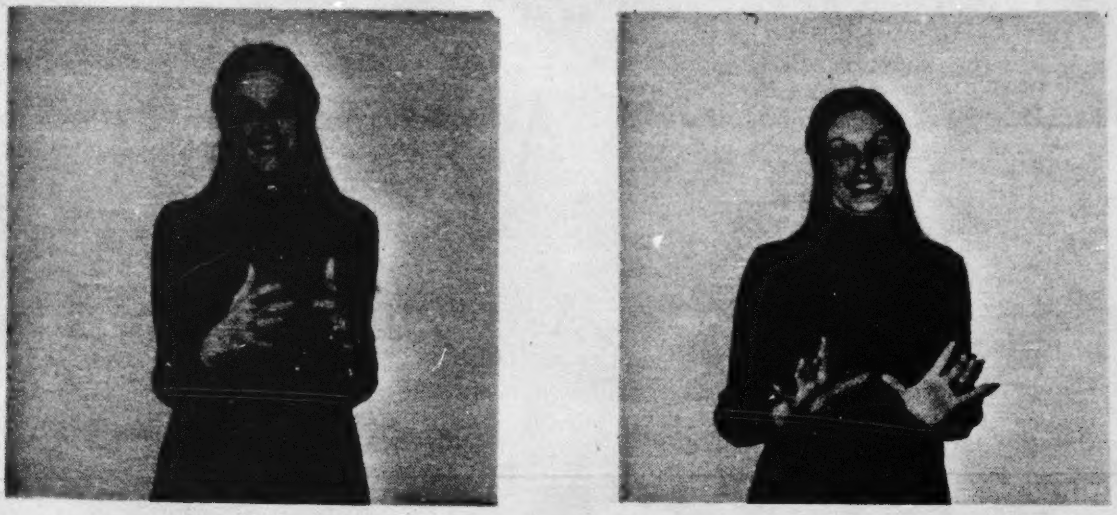
Non-dominant hand is perpendicular to the body. Dominant hand in a (Q) position pulls upward and pinches thumb and index finger together.

# PICTURE



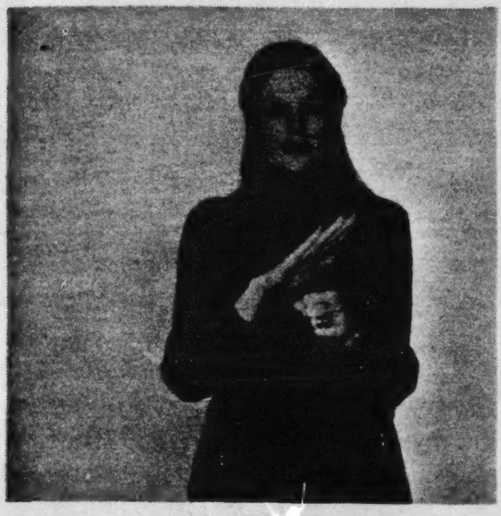
Dominant hand forms the letter (C). The non-dominant hand is perpendicular to the body. The (C) hand moves from the side of the temple down to the palm of the non-dominant hand.

# PLATE



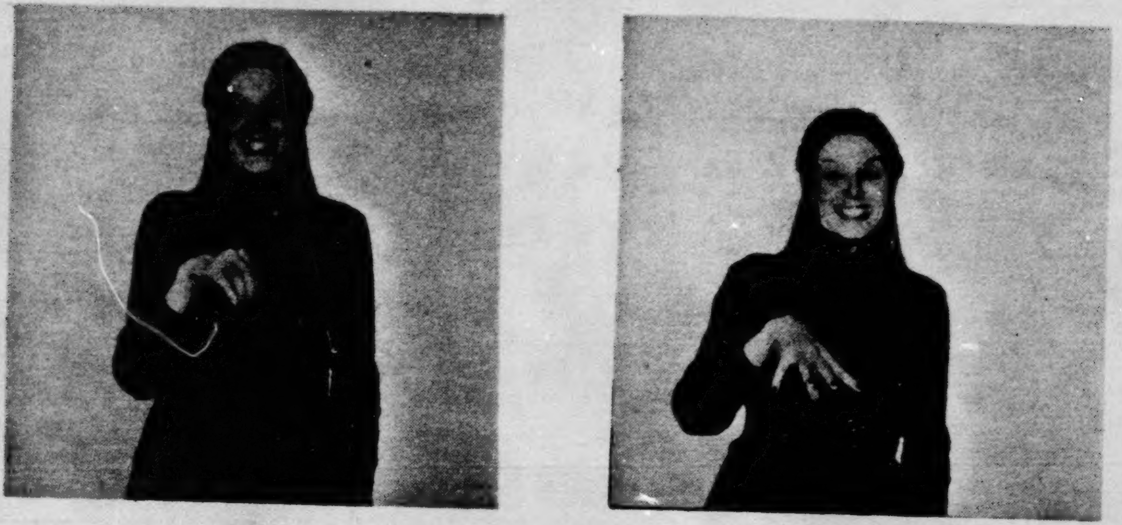
Middle fingers of both hands touch and move towards the body outlining the shape of a plate until the thumbs of both hands touch.

# POP



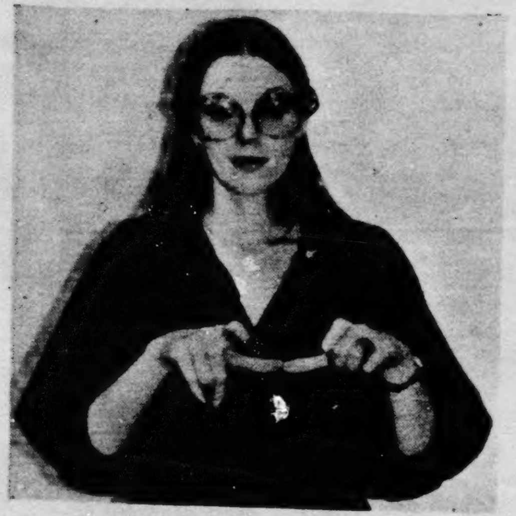
Non-dominant hand form an (s) fist. Dominant hand with palm face down hits the top of the non-dominant hand.

# PUT



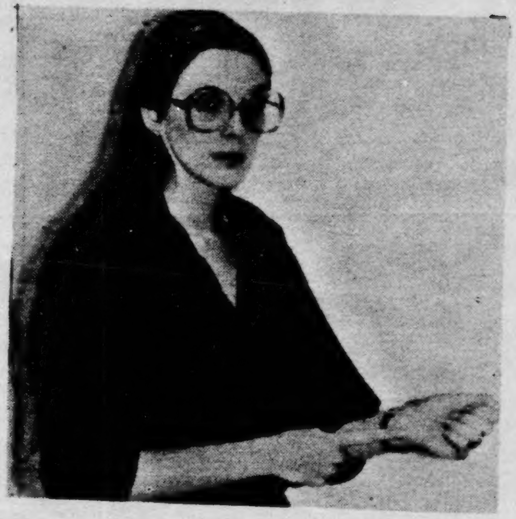
Dominant hand forms the letter (O).
Move hand down and release fingers
as if putting something down.

# RUN



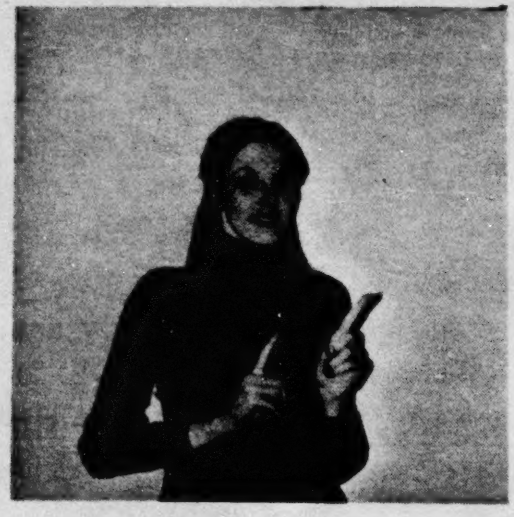
Palms down in (L) hands, thumb tips touch. Hands move forward with index fingers flicking in and out.

# SHOW



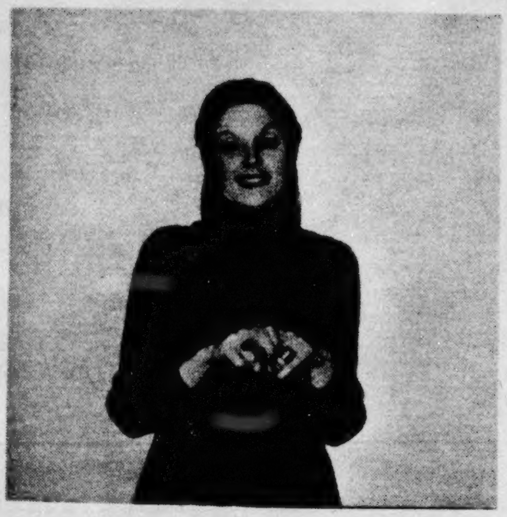
Non-dominant hand forms an (A) with the palm facing to the side. The index finger of the dominant hand touches the wrist of the non-dominant hand and both move forward.

## SIGN



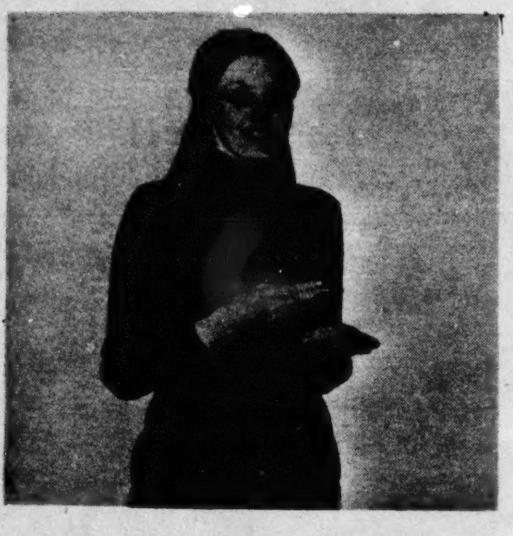
The index finger of both hands are extended up and alternately make circular motions.

## SIT



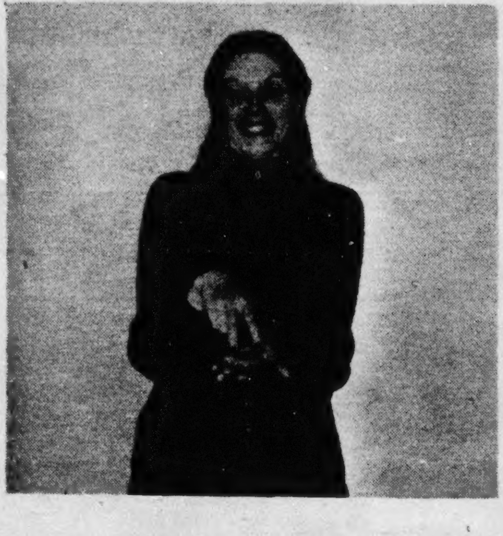
Non-dominant hand is placed in a plam down (U). (U) fingers of dominant hand sit on (U) fingers of non-dominant hand.

## SPOON



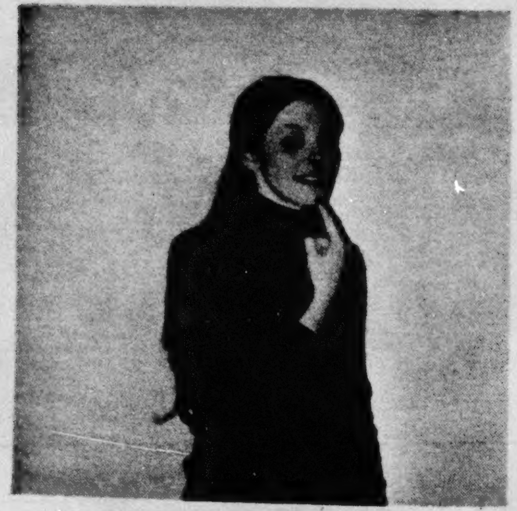
Non-dominant hand is extended with palm face up. Dominant hand forms the letter (H) and moves in a vertical, circular motion above the palm of the non-dominant hand.

## STAND



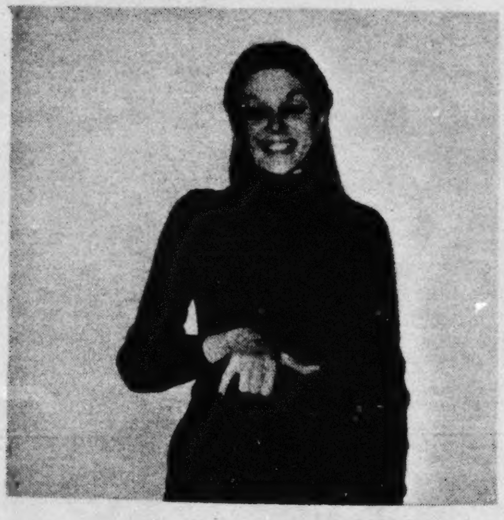
Non-dominant hand is extended with palm face up. Dominant hand forms the letter (V) and stands on the palm of the non-dominant hand.

## TELL



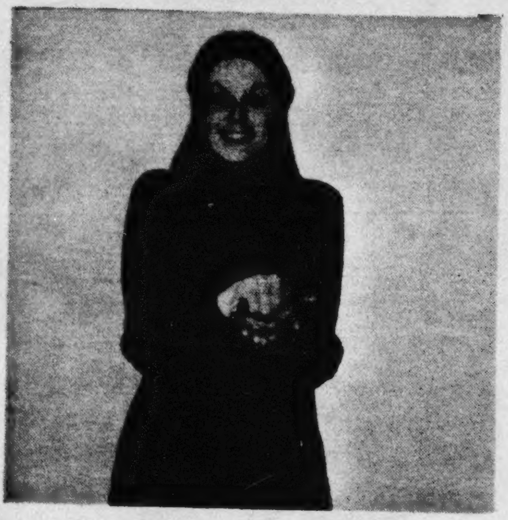
Index finger of the dominant hand, with palm face in, begins under the chin and flips out.

## THE



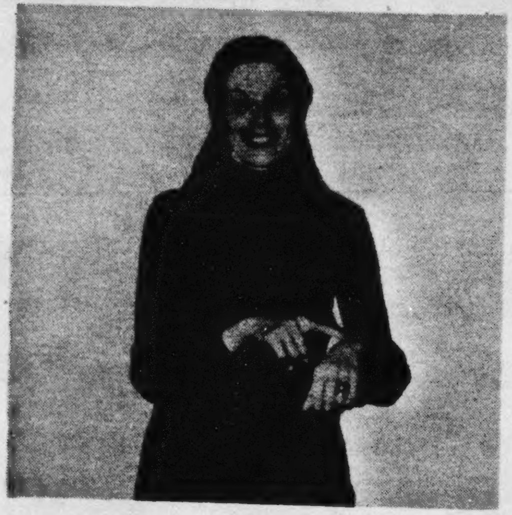
Dominant hand forms the letter (Y) and nods once quickly.

## THIS



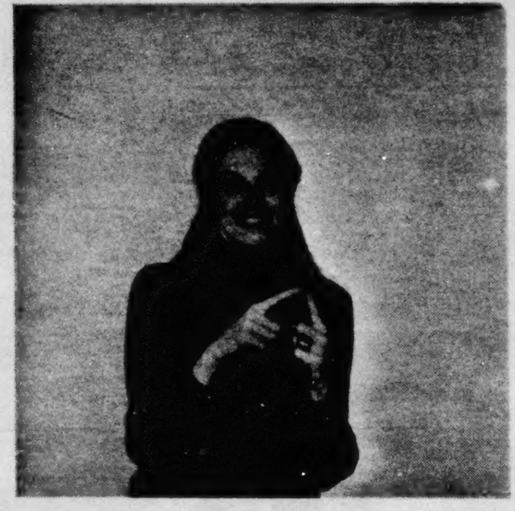
Dominant hand forms the letter (Y). The (Y) hand sits on the palm of the non-dominant hand.

## TIME



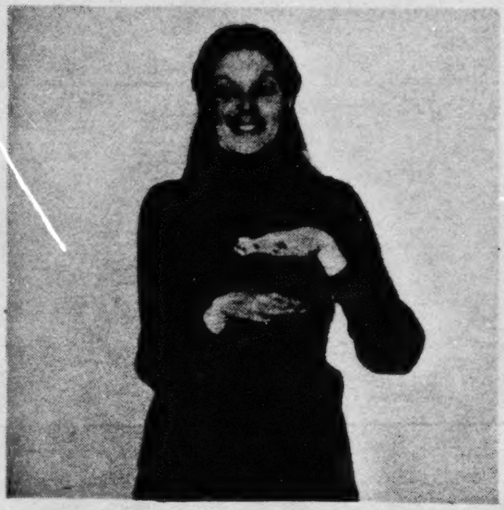
Index finger of the dominant hand taps the top of the wrist of the non-dominant hand.

# TO



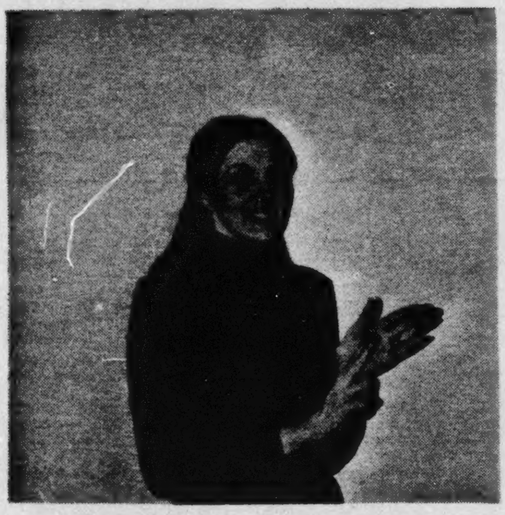
Index fingers of both hands touch.

# UNDER



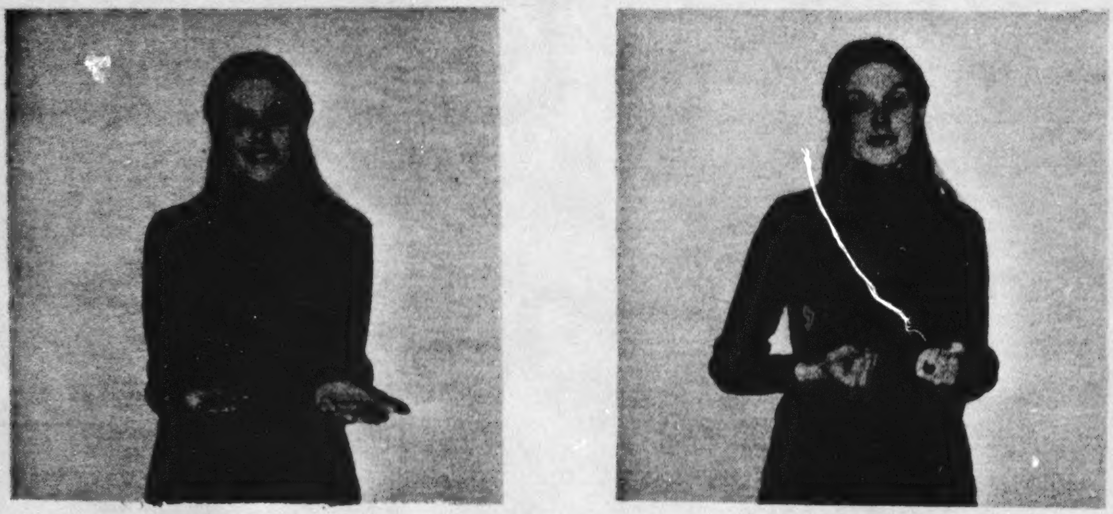
Non-dominant hand is extended with palm face down. Dominant hand palm down circles under non-dominant hand.

# UP



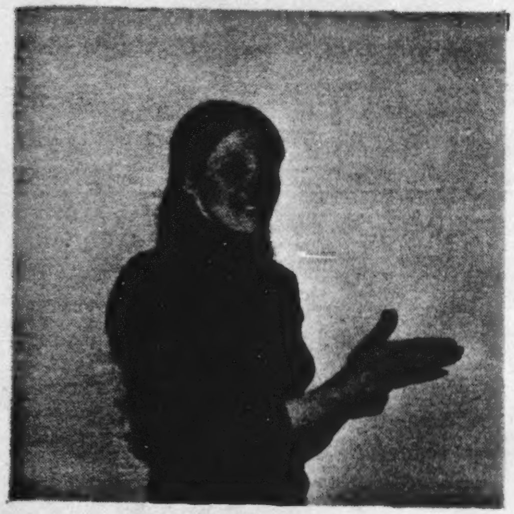
Non-dominant hand is perpendicular of the body. Dominant hand forms the letter (H) and slides upward and away across the palm of the non-dominant hand.

# WANT



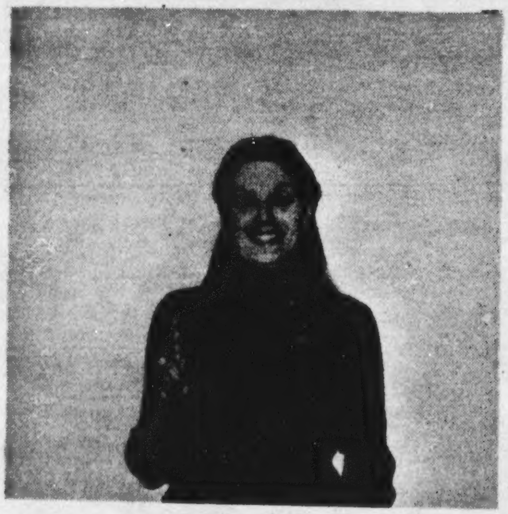
Both hands are extended palms up. Pull hands inward towards body to form fists (S).

# WHAT



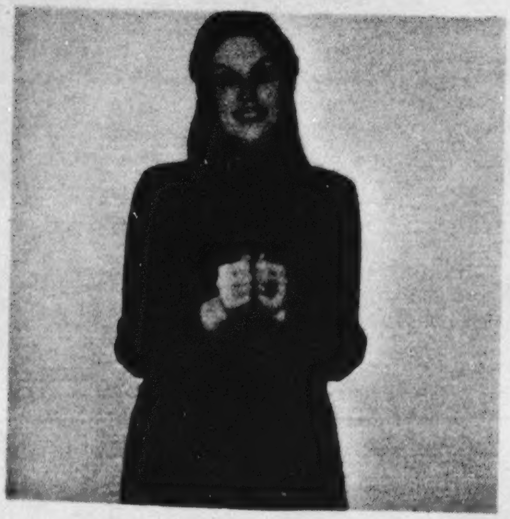
Non-dominant hand is perpendicular to the body. The index finger of the dominant hand brushes down and across the fingers of the non-dominant hand.

# WHERE



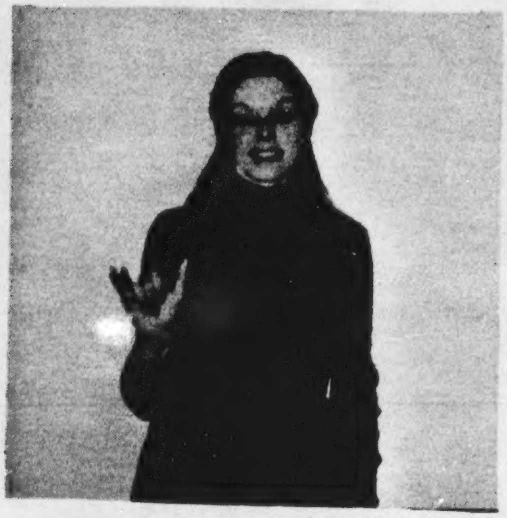
Index finger of the dominant hand shakes left and right with palm face out.

## WITH



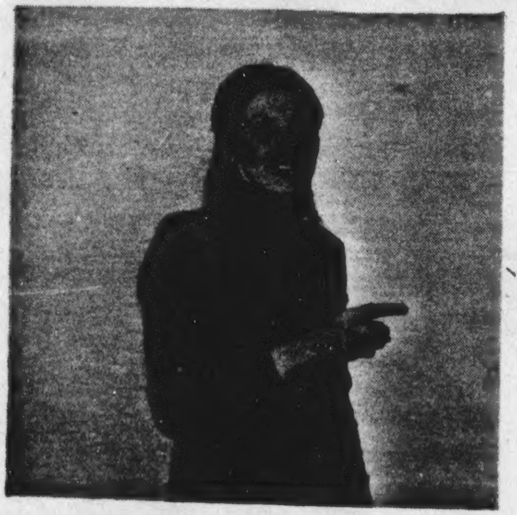
Two (A) hands touch, fists together.

## YES



Dominant hand forms the letter (Y). Shake it up and down several times. An alternate sign for "yes" is to place the dominant hand in an (S) and nod it up and down.

## YOU



Index finger of the dominant hand points at the person being addressed.

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# Bibliography

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814 Thayer Avenue
Silver Spring, Maryland 20910

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Alphabet Wall Cards, Joyce Motion Pictures.

*Signed system used for these materials is based on Ameslan.

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